THE OIL WEEKLY

ENGINEERING « NEWS » STATISTICS

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The Oil Man's Calendar

JULY 12–13	Seventeenth International Geological Congress, Moscow, U.S.S.R. Interstate Oil Compact Commission, Santa Fe, New Mexico.
AUG. 10–15	Third Michigan Oil & Gas Assn., Mt. Pleasant.
SEPT. 15–17	National Petroleum Association, Hotel Traymore, Atlantic City, New Jersey.
16–19	Pacific Oil Show & Black Gold Festival, Taft, California.
SEPT. 27 OCT. 1	American Gas Association, Cleveland, Ohio.
OCT. 11–15	Twenty-Sixth National Safety Congress & Exposition, Kansas City, Missouri.
11–16	Oil-World Exposition, Houston, Texas.
13–14	Indiana Independent Petroleum Association, Indianapolis, Ind.
14–16	American Association of Petroleum Geologists, Mid-Year Meeting Pittsburgh, Pennsylvania.
14–16	Independent Petroleum Association of America, Houston, Texas.
18–22	American Welding Society, Atlantic City, New Jersey.
21–22	Michigan Petroleum Association, Traverse City, Michigan.
29–30	Mid-Continent Oil and Gas Association, Texas Division, Dallas, Texas.
NOV. 8–12	American Petroleum Institute, (Annual), Chicago, Illinois.
1938 MAR. 16–18	Annual Meeting, American Association of Petroleum Geologists, Roosevelt Hotel, New Orleans, La.

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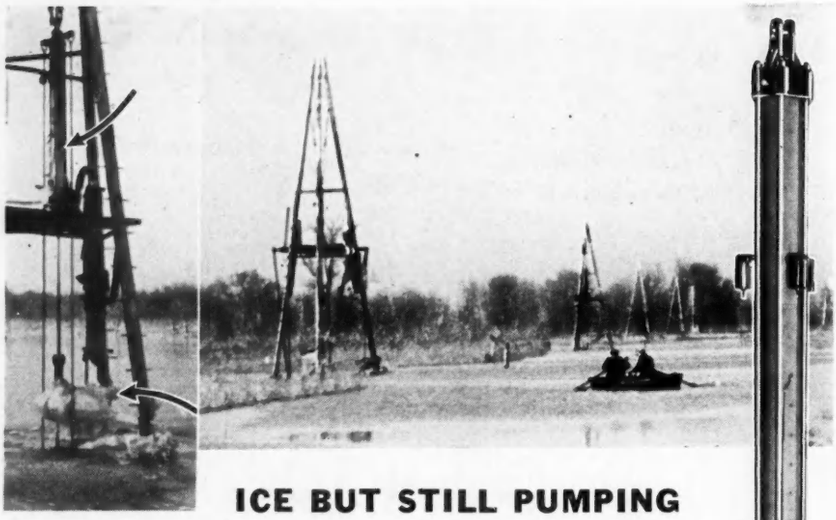
SULLIVAN PUMPHEADS FIGHT FREEZING FLOODS and WIN



ICE BUT STILL PUMPING

FROM beneath the flats of the Wabash River, below Terre Haute, they pump oil. In the midst of the flood excitement, last winter, this somnolent river awoke, and overflowed its banks. The water rose higher and higher. Then the weather turned cold, and it froze.

Well after well went down, but not those with the Sullivan Pumpheads. There were no belts to freeze and break. No engine to short circuit and stop. The compressor was safe above flood stage. No rod lines to gather ice and break. Yet the ice balled-up on the polished-rod grip, big as an elephant's head. But the Sullivan Pumpheads carried on.

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LOOKING AHEAD

WITH THE EDITOR

West Texas - New Mexico Special Issue . . .
Vast Area Has Large Potential Value . . .
One of Most Active Territories . . .

THE West Texas-New Mexico Permian Basin is a big area, and at this time big things, so far as the oil industry is concerned, are taking place.

The district embraces 20,721,000 acres, or 32,330 square miles, in which more than 125 oil and gas fields are located. These pools have produced nearly 1,000,000,000 barrels of crude, and current production is about 300,000 barrels daily under rigid proration restrictions. Production is coming from 7350 wells at depths ranging from less than 1000 to 6300 feet.

The vast area of potential oil land and the large number of proved undrilled locations combine to make it one of the most attractive exploratory areas of the day, as shown by the 650 active field operations.

In view of the activity and interest in the region, special editorial treatment will be given the region in

THE OIL WEEKLY'S
West Texas-New Mexico
Permian Basin Number
July 19, 1937

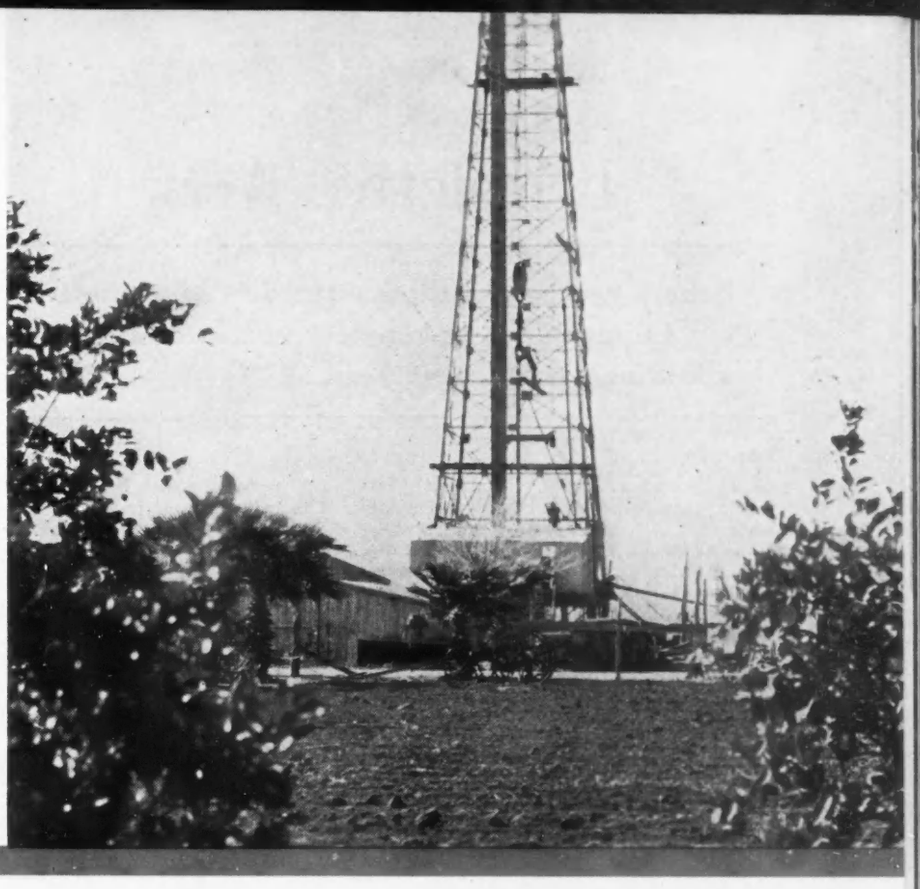
For more than six months our editorial department has been gathering and compiling material for the issue. Because of the popular reception received by the Texas-Louisiana Gulf Coast, South Texas, and Western Kansas numbers, the editorial treatment will follow the style used in these issues.

A concise factual history of each field will show the location, method of discovery, date of finding, number of acres proven, number of wells drilled, production, reserves, producing depths, type of oil, market outlets, and principal operators.

In addition to this important feature several feature articles will discuss the play now taking place, gas-lift possibilities, geological work and pressure drilling practices in the region.

Still another very important feature will be the publication of a large wall-size map in two colors, which will show dry holes and fields.

THIS WEEK



THIS SCENE of an oil derrick set among orange and palm trees is not in California, but in the Clarkwood sector of the Saxet field at Corpus Christi, Texas.

STATISTICS for the first half of 1937 show that the industry is running at the highest level ever known from several angles. Consumption is at an all-time peak. Keeping pace with demand is a record output, which is 17 percent higher than last year, and greater than the entire year of 1932. Drilling, up 16 percent over last year, has resulted in more completions than in all of 1933 or 1931, and may exceed all years but 1936. **Page 14.**

THE record-breaking demand for oil products during the first six months of 1937 is an accurate barometer of improved business conditions, according to the petroleum conservation division of the Department of Interior. This demand is dependent upon the use of automotive vehicles, it was declared. More cars are on the highways, and owners are spending greater sums for travel than in past years, the report continues. **Page 13.**

IN issuing a new proration order for the Moore field, the Oklahoma Corporation Commission for the first time took into consideration both bottom-hole pressures and potentials.

THE Senate Labor Committee last week made important changes in the wage and working hour control bill, which greatly modified it. The changes established restrictions upon the level at which minimum wages could be placed by the administration, and also put restrictions on its regulation of working hours. **Page 10.**

IT now appears that Congress will not consider the proposed important changes in the depletion allowances before next year, which will give oil operators time to file protests. **Page 10.**

CURRENT SITUATION

(Latest Available Weekly Data)

Outlook.—Continues favorable.

Crude Market.—Remains strong.

Refined Oil Markets.—Increasingly firm.

Crude Production. — Up 22,225 barrels daily.

Crude Runs to Stills.—Up 35,000 barrels to 3,270,000 daily.

Crude Stocks. — Up 218,000 barrels to 307,679,000.

Gasoline Stocks.—Down 755,000 barrels to 74,672,000.

Gas and Fuel Oil Stocks. — Up 789,000 barrels to 101,184,000.

Drilling. — Completions last week 677, up 156.

See* MARKET SECTION *for Details

DRILLING time and rig equipment upkeep costs have been reduced in the Dickinson field by a contractor using large openings in the mud circulating system from the pump to the bottom of the hole. By eliminating all restrictions that would set up friction against the flow, the pumps operate at a much lower pressure in handling an increased volume. **Page 40.**

WITH the completion in recent years of many high-pressure gas wells, the regulation of deliveries and the prevention of freezing has become an increasing problem. One concern has overcome these difficulties successfully by the installation of a cutting device to regulate deliveries and reduce pressures, a hot water heater to eliminate freezing, separator connections and drips to remove the fluid, and an orifice meter to procure measurement. **Page 34.**

CLOSE observance to fundamental upkeep, in addition to a regular inspection program, is necessary to avoid high replacement cost, exorbitant depreciation and poor efficiency in water pumps. That such practices will return large dividends has been proved by a thorough investigation, which proved that 80 percent of the water pump failures reported were due to neglect and abuse. **Page 20.**

FOUR Diesel engines are being used to power a rig now operating in the Gulf Coast. Two of the engines are mounted on a level with the derrick floor and are used to drive the draw works and rotary table. The other engines have been installed at ground level, and operate the mud pump. **Page 44.**

Legislative Actions

Senate greatly modifies wage and hour control bill . . . Congress not to consider reduction of depletion allowances until next year.

THE Senate Labor Committee last week greatly modified the wage and hour control bill, setting up restrictions at which the administration could peg minimum wages and maximum working hours. The only other important oil industry legislative development at Washington in the week was indications that the consideration of proposed reductions in the depletion provisions of the revenue law would not come before next year, which would give oil operators an opportunity to organize in their fight against the changes.

Modify Wage-Hour Bill

A sharply modified wage and hour control bill, authorizing the administrative agency to fix minimum wages no higher than 40 cents an hour and a maximum work week of not less than 40 hours, was voted by the Senate Labor Committee July 8.

The committee struck from the bill industry-opposed provisions permitting the proposed labor standards board to fix "fair" wages and hours, and eliminated all sections prohibiting "oppressive" labor practices.

Under the bill, the administrative board would be empowered to fix the minimum wage and maximum work week for each industry, with the 40-cent, 40-hour limits; while it could not order higher wages or shorter hours than those fixed in the bill, it may order lower wages or longer hours without restriction. The committee eliminated proposed provisions exempting employers of less than 15 persons, and the bill would apply to every employer. Agriculture is the only industry specifically exempted. But all industries where standards higher than those provided in the bill have been reached by collective bargaining would also be exempted.

As a concession to industry, the committee incorporated a provision authorizing the tariff commission to investigate differences in costs of production here and abroad which may result from the new law, and to determine where increases should be made in import tariff rates.

The House Labor Committee will begin consideration of the bill next week.

Postpone Depletion Changes

Consideration of changes in the depletion provisions of the revenue law, sought by the treasury department as part of its "tightening-up" program, will probably be deferred until next year.

Some $75,000,000 a year in revenues, more than half of which is believed to apply to the oil industry, is said by treasury officials to be lost through the operation of the depletion provisions, which give operators of oil and gas wells a deduction of 27½ percent of the gross income from the wells. The treasury would have the depletion provisions eliminated entirely.

Members of congress believe that to take this situation up at the present time, in connection with a bill to be submitted to plug loopholes in the tax statutes which make evasion and avoidance of taxes possible, would be to delay passage of the bill indefinitely.

It is admitted that the depletion and the community-property provisions, which the treasury also would have amended, are the two most difficult points of the whole administration proposal. No evasion or avoidance is alleged by the treasury in connection with either, but the depletion provisions were cited as an outstanding example of concessions granted certain classes of taxpayers in the laws, which should be eliminated in the interests of increased government revenues.

Would Hit Strippers

While the treasury would have the depletion provisions eliminated in toto, members of congress are not agreed

Oil in the Courts

New test of Texas gas proration likely . . . Field equipment theft prevention program started.

NOTHING new took place last week in the two major anti-trust suits confronting the industry. One of these charges 24 concerns and numerous individuals with violating the trust laws by operating a buying pool in East Texas, while in the other the State of Texas alleges its state laws have been disregarded by the action of companies agreeing to a code of fair practices several years ago.

Of interest were indications that the courts may soon provide another legal test of gas proration in Texas.

Texas Gas Proration

A new test of gas proration is believed to be headed for the courts in Texas.

Since the Supreme Court of the United States found the Texas dry gas proration order invalid, the Railroad Commission has not attempted to write a new proration order, although state's attorneys interpreted the court's decision as sanctioning proration of gas based upon the prevention of drainage between leases.

This delay has been due to two things: First, the fact that conditions in the Panhandle are generally good and there is no great need for an order at this time, and second, the fact that the commission was hopeful that the legislature would clarify certain portions of the Texas law.

Instead of clarifying the law, the legislature wrote a new law applicable solely to the Panhandle sour gas field and called for proration of production in that field. The sour gas proration order is now in the making, and it will be based upon the prevention of inner lease drainage.

While commissioners themselves did not make the statement, it was learned that they are hopeful that the courts will uphold the sour gas proration order. Should it be upheld, a precedent would be established for the writing of a sweet gas proration order, if such an order is needed in the future, without further legislation.

Theft Prevention Program

The state-wide theft prevention program of the Texas Division of the Mid-Continent Oil & Gas Association is getting under way with two regular field men working, one in West Texas, the other in East Texas fields. According to plans outlined by the committee appointed on this work, these men act as investigators and information men, working closely with peace officers of the various counties. Since the inception of the program on May 1, they have succeeded in assisting in the apprehension of a number of thieves, as well as in the recovery of field property.

The sheriffs of the state of Texas have been notified that the association will pay a reward of $100 upon the arrest, conviction and incarceration in the penitentiary of thieves guilty of stealing oil field equipment. Every person or company is urged to keep the Mid-Continent Oil & Gas Association Texas Division office at Dallas informed on the details of thefts. It is requested that complete information be given.

It is planned to issue warning signs for posting on leases and buildings that announce rewards will be paid for the apprehension of those stealing equipment from the property. The signs, which will be available within a short time, will cost $1.00 each, and already several hundred have been ordered.

that such action would be equitable and point out that the oil and gas industry has a depletion problem which should be recognized in the writing of tax laws. The operators of stripper wells, it is declared, would be especially affected by elimination of these provisions, which might result in the abandonment of thousands of wells which can be operated profitably only by application of the depletion deduction.

Since there is no question of evasion or avoidance involved, leaders in congress have expressed the view that the treatment of depletion should be deferred until the anticipated general tax revision is undertaken next session, when there will be ample time to study the situation and to hear the many oil and gas operators who undoubtedly would wish to testify at hearings.

Depletion Not Discussed

The question of depletion was not touched upon during the hearings by the joint congressional committee investigating tax evasion, and it is understood treasury officials are willing to let the matter go over until next year.

The question of eliminating the provision, which permits deductions at various rates for the different kinds of mines, was raised in President Roosevelt's message to congress June 1, accompanying which was a report from the treasury on various methods adopted for tax evasion purposes. The depletion provision, the treasury report said, "is perhaps the most glaring loophole in our present revenue law." Given rates ranging from five to 27½ percent, the oil and mining industries are saving about $75,000,000 a year in taxes, it was declared, and have been enjoying the privilege since 1928, despite recommendations in 1933 that the provision be eliminated.

Depletion Fight Urged

Upon his return to Dallas from Washington, where he conferred with a number of oil states' representatives, George C. Gibbons, executive vice president of the Texas Division of the Mid-Continent Oil & Gas Association, declared that the danger of the depletion allowance being reduced materially was imminent. He urged producers in Texas to send to the association detailed evidence of the necessity of the depletion provision in the normal conduct of their business so that it might "do effective service when the time comes."

Inspect Pollution Conditions

A public hearing will be held in Houston next Friday on the pollution conditions in the Houston Ship Channel.

Legislator Conder Hoskins of Gonzales, chairman of the committee appointed by the House to study the pollution of Texas streams, said the committee would inspect the San Marcos and San Antonio rivers and the coast along Corpus Christi before going to Houston. Right now the committee is primarily concerned with pollution due to improper sewage disposal rather than pollution from oil wells, but Hoskins said the latter subject would receive the committee's attention. He already has made an inspection of the Luling field and found it in "bad condition" except on major company leases.

Proration Matters

Both bottom-hole pressure and potential factors in new Moore order . . . Important hearings are scheduled . . . Texas has new gas testing car.

LAST week while the Oklahoma Corporation Commission was attempting to reduce gas wastage in the high-pressure and large gas producing field at Moore, the Texas Railroad Commission was comparatively inactive, being concerned only with the scheduling of several hearings, including the statewide meeting. Like in Oklahoma, the Texas commissioners are also concerned with high gas-oil ratios, and took a step to make complete tests of all such wells by placing a testing car in the fields.

New Moore Potential

A second attempt was made July 6 by the Oklahoma Corporation Commission to reduce the obvious waste of natural gas and reservoir energy in the Moore field of Cleveland County, when it issued new regulations covering potentials and allowables in the pool, and employed for the first time the combined use of bottom-hole pressures and potentials as factors.

The new method of figuring output for wells at Moore lowered its production from an estimated 13,000 barrels to 10,494 barrels daily.

As of June 1, 24 wells in the field had a potential of 520,540 barrels. With two more wells added by July 1, the reduction, through the adjustment caused by the new method, dropped its potential to 409,436 barrels. The 26 wells showed an average pressure of 1535 pounds at minus 6000 feet.

Pressure by wells at minus 6000 feet and adjusted potentials are shown in the following table:

Company and Wells	Pressure	Potential
Anderson Prichard:		
Oklahoma 1	1934	22,781
State 1	997	11,744
State 2	895	10,542
State 3	880	10,366
Carter Oil Company:		
Walker 1	1855	26,917
Walker 2	1778	22,976
Gulf Oil Corporation:		
Allen 1	2445	7,662
James 1	1685	27,097
Sinclair Prairie:		
Bagby 1	1630	28,804
Bagby 2	1777	8,785
Bagby 3	2221	14,576
Bagby 4	1710	15,693
Fant 1	1507	6,387
Franklin 1	1429	23,890
Franklin 2	1394	16,420
Holmes 1	1710	8,391
Marvel 1	1350	13,123
Marvel 2	1237	14,571
Marvel 3	1278	15,054
Fant-Meyers 1	1482	4,908
Peaches 2	1320	15,548
Rice 1	1457	13,209
Rice-A 2	1655	15,693
Strauss 1	1412	20,575
Stanolind:		
State 1	1210	14,253
State 2	1653	19,471

Schedule Texas Hearings

The Railroad Commission of Texas will hold its next monthly oil and gas proration hearing on July 19, and with Commissioner Ernest O. Thompson back from Europe, it is presumed that at least one member of the commission will be present. The last hearing was conducted by Chief Supervisor Laten Stanberry without the assistance of the commissioners.

The notice of hearing for the statewide meeting asked for nominations for August and forecast nominations through January. Hearings on three other fields have been set for the same date:

Operators in the West Beaumont field have asked for a higher allowable and that the various producing horizons in the area each be treated as a separate field with separate allowables. Evidence will be heard upon their request at the statewide hearing.

At the same hearing the commission will take up field rules for the Midway field in San Patricio County; and the Heyser field in Victoria County.

The hearing scheduled for July 14 on field rules for the Killam field in Webb County was postponed until July 20, as several operators desired to attend the Interstate Compact Commission meeting and the New Mexico proration meeting on that date.

The Barbacoas hearing scheduled for July 6 was indefinitely postponed when the applicant for the hearing failed to show up on the date set.

The commission has called a hearing for July 20 on field rules for the James pool in Young County.

Compact Meeting Monday

Besides the hearings scheduled in Texas there will be another important meeting next week on proration matters. It will be the Interstate Oil Compact meeting July 12 at Santa Fe, New Mexico. It is expected to be one of the largest gatherings at a meeting of this group. At least four governors of oil producing states are expected to attend.

One of the important matters to be discussed will be the United States Bureau of Mines survey of the condition of oil in storage in the nation. Doctors Cuttell and White of the bureau will be present to make the report, which is expected to show what percentage of the amount in storage is fit for refinery use. Some have contended that much of the volume stored could not be refined.

As the meeting date grew near, the Interstate Oil Compact Commission was assured another member state, Governor Henry Horner of Illinois having recently signed a bill providing

for the participation of his state in the extension of the compact until September 1, 1939.

New Testing Car

An oil and gas testing car, described as the most complete operating in the Mid-Continent area, has been put into active duty by the engineering division of the Texas Railroad Commission. The first tests are being made in the Gulf Coast area to determine whether high gas-oil ratio wells producing condensate should be classified as oil or gas wells.

A program for at least the next 12 months already has been outlined for the testing crew.

The car is a one-half ton, panel-type truck with power take-off, and has been fitted with the following equipment: a 12,000-foot capacity reel complete with measuring device and hydraulic weight indicator; a 5000-pound per square inch range dead-weight tester; apparatus for determining the gasoline content of natural gas; high pressure samplers; sub-surface clock equipped pressure gage with 6000 pounds per square inch range; recording pressure gages having varied ranges; specific gravity balance; critical and non-critical flow gas testing equipment; and a complete set of tools carried in a specially designed tool box.

The equipment will be used in the following work: experimental determination of back-pressure curves on gas wells producing liquid; determination of the behavior of light hydrocarbons in high-pressure wells under reservoir conditions; and determination of the solubility of natural gas in crude petroleum.

Taxation Trends

Industry expected to pay $1,300,000,000 during 1937 . . . Texas taxes are up.

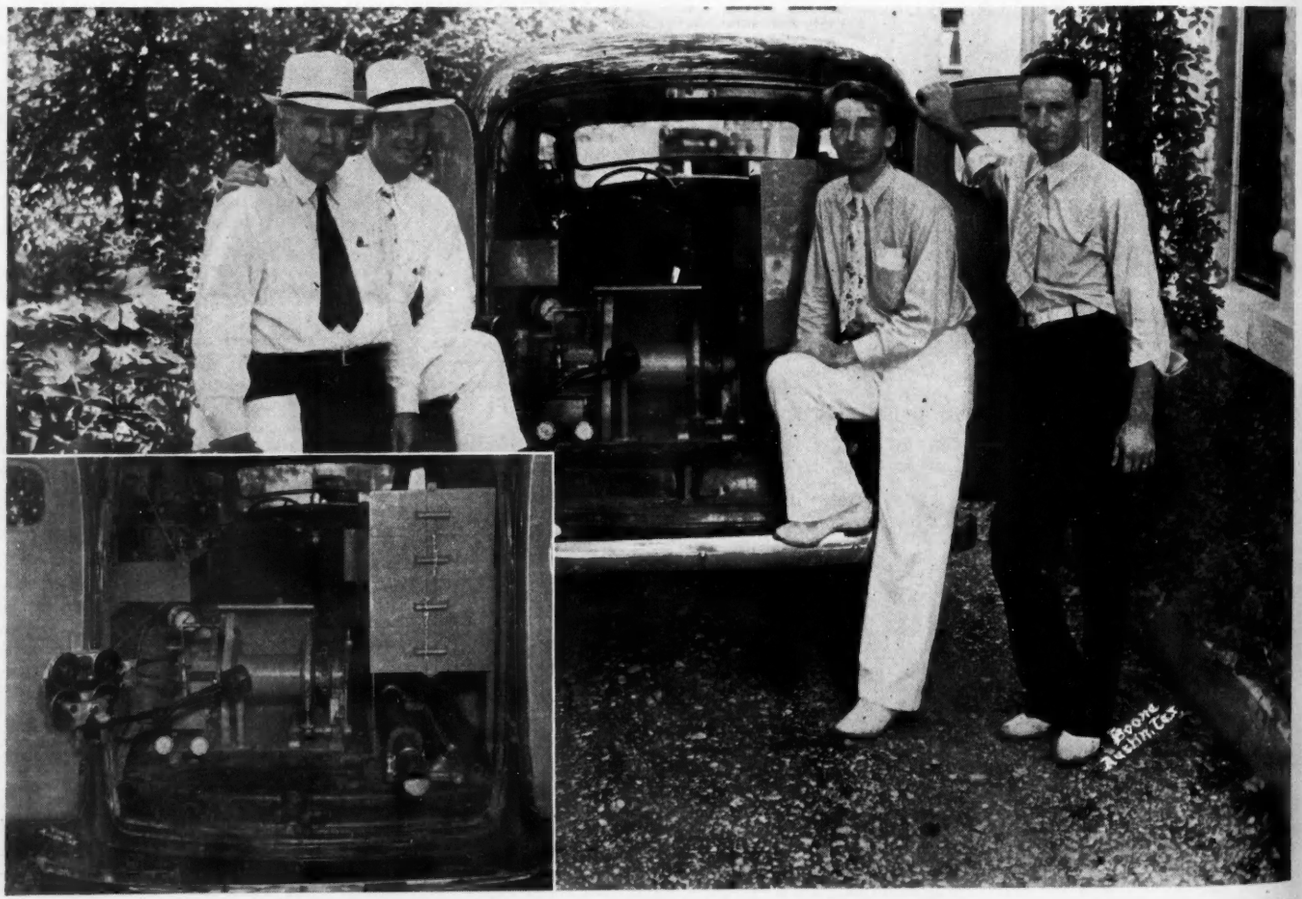
IN A REPORT issued by the American Petroleum Industries Committee it was estimated that taxes this year on products and operations of the petroleum industry would approach $1,300,000,000, which in turn supports many workers. In Texas records being compiled by the Mid-Continent Oil & Gas Association, Texas division, indicated that oil taxes in the state increased last year. It is anticipated that the Texas Automatic Tax Board will soon announce the tax assessment rate in the state for the ensuing year. There is a chance that a small reduction may be made, which would be of importance to the oil industry because of its large investment.

Support Two Million

Wages and taxes originating in the petroleum industry support 2,000,000 persons, half of whom work directly in the industry. The other million are supported by taxes levied upon the products and activities of the industry, according to the American Petroleum Industries Committee. For every man working in the production, refining, and marketing of petroleum, the taxes collected upon his productivity support another person either on the public payroll or in industry.

This year taxes on the products and operations of the petroleum industry will approach $1,300,000,000. About half of that amount will be spent in road financing and will give employment to about 670,000 men, the Committee says, citing studies of the U. S. Bureau of Public Roads which indicate that 10,300 men are given one year of employment, directly and indirectly, for every mil-

The engineering division of the Texas Railroad Commission has placed in service one of the most complete oil and gas well testing cars in the Mid-Continent. It will be used in various proration duties of the commission. Working under the direction of V. E. Cottingham, chief of production for the commissien, and A. M. Crowell, chief gas engineer, the test car will be under the charge of Dr. F. V. L. Patten, chemical engineer, and Charles Seekamp, Jr., mechanical engineer, who was brought to Austin from East Texas particularly for the work. These men are shown in the photograph in the order named above.



lion dollars spent in road work. Taxes originating in the petroleum industry constitute about 11 percent of the total revenue of the federal, state, city and county governments, employing 3,337,000 persons. Thus, the industry's tax contributions, after deducting that spent in road work, will support 183,000 government employes, or 5.5 percent of the total workers on the public payroll. Governmental expenditure of petroleum tax money for supplies, etc., it is estimated, brings the total number supported by petroleum taxes to one million persons.

Texas Taxes Increasing

Tax data for 1936, now being completed by the Texas Division of the Mid-Continent Oil & Gas Association, shows that the producers of Texas were given an increase of approximately 10 percent in production taxes by local taxing agencies over 1935, and reports of 1937 show continued increases in valuations and rates throughout the counties where oil is produced. The special session of the Texas legislature in 1936 added 37½ percent to the producers' tax bill so that in total the producers' tax burden is now 50 percent greater than two years ago. As a result the state of Texas is receiving this year nearly $8,000,000 more in new tax revenues from oil producers, while the counties have greatly increased their levies.

Moreover, producers of oil in Texas continue to have tax threats face them in both state and nation quarters. Governor James V. Allred, in a recent speech, strongly advocated more taxes on the petroleum industry, and his special sessions already planned for September will no doubt find many bills designed to add greater tax burdens on the oil producers of Texas.

Texas Tax Board to Meet

Texas taxpayers are awaiting the meeting of the Automatic Tax Board as to whether they may expect a reduction in the tax rate this year.

The current tax rate is 35 cents on the $100 valuation for general revenue purposes, seven cents for Confederate pensions and 20 cents for schools. The rate is fixed each year along toward the end of July or early in August by the Automatic Tax Board.

No reduction was foreseen in the general revenue and Confederate pension taxes but there definitely was a prospect for a reduction, if not the entire abolition, of the 20 cent school tax. The condition of the available school fund was such that the Board of Education could have provided a per capita apportionment of $19.00 for the coming school year without using any ad valorem taxes. Had the board so voted, the apportionment would have been as large as any in the history of the state. It was boosted a year ago from $17.50 to $19.00.

But the Board of Education meeting in Austin last week decided to use all the money they could find and fix a per capita apportionment of $22.00, which will absorb the full amount brought in by the 20 cent ad valorem rate. Governor James V. Allred was openly displeased at the board's action. He had hoped that it would be fixed at not more than $19.00 and had publicly expressed the hope that the 20 cent tax could be eliminated this year.

It at first appeared that the Board of Education's action would force the Automatic Tax Board to continue the 20 cent tax. Official sources, however, have indicated that the board may do nothing of the sort. The board is composed of the governor and the state tax commissioner — appointed by the governor; and the state comptroller. In other words, the governor has a voting majority on the board. If he persists in his attitude that the ad valorem taxpayers should get the benefit of the financial condition of the school fund, he might easily refuse to vote the 20 cent tax rate. Authoritative sources say that it is more than probable that the tax board will abolish or at least lower the school tax rate.

Miscellaneous News

Government agency says record-breaking gasoline demand is an accurate barometer of improved conditions.

DEMAND for petroleum products has become an accepted indicator of business conditions, Secretary of the Interior Harold L. Ickes was told July 8 by the petroleum conservation division of the Interior Department, and the best single index of prosperity in the petroleum industry is that of domestic gasoline consumption.

Gasoline Consumption Up

The record-breaking demand for oil products during the first half of the current year is a fairly accurate barometer of improved business conditions, it was declared.

From a depression low of 176,000,000 barrels for the first six months of 1933, the petroleum conservation division reported, gasoline consumption has increased steadily, reaching 195,000,000 barrels in the first half of 1934, 201,000,000 barrels the following year, 221,000,000 barrels in 1936, and, it is estimated, 246,000,000 barrels for the half year just ended, an all-time peak.

"While it is true that there has been an upward movement in the export of petroleum products which, in terms of percentage increase, appears to be quite large," it was stated, "nevertheless from a quantitative point of view the export represents but a very small fraction of the total oil business of the country.

"Exports of crude oil during the first quarter of 1937, as compared with the same quarter of 1936, increased from 13,439,000 barrels to 15,467,000 barrels. This increase of approximately 2,000,000 barrels during the three months amounted to not quite two-thirds of a day's production. During the same period, gasoline exports increased from the 1936 figure of 7,610,000 barrels to 9,992,000 barrels in 1937, an increase of about two and one-third million barrels, or approximately two days of domestic demand during the same four months.

"Since June, 1932, gasoline imports have been negligible. Crude oil imports since 1932 have been comparatively steady, exports have been increasing, with a consequently increased net export.

"It is therefore fairly obvious that the increase in demand for petroleum products is almost entirely traceable to the increase in domestic demand."

In an economic consideration of the petroleum industry, it was pointed out, recognition should always be made of the fact that the demand for petroleum products is a derived or secondary demand, that is to say, dependent upon the use of automobiles, trucks, tractors, airplanes, and other automotive devices as well as industrial machines.

"Gasoline demand, which product is the main source of revenue for the industry," the division said, "does not follow the downward trends in business quite as quickly as in several other industries, but in upward movements gasoline demand cannot, for any considerable period of time, outrun the actual demand developed through the use of automotive devices and machinery. The demand for gasoline is a real demand, created by activity.

More Cars and Travel

"Just as gasoline is the principal product of the petroleum industry, the automobile is the principal consumer, away above all others in creating the demand. The number of automobiles in use and the extent to which they are being used is therefore the key to prosperity in the petroleum industry. It is estimated that on July 1, 1937, there were 27,000,000 automobiles in use. The number of cars in use has been one of progressive improvement for a number of years past. During the first six months of 1935, 1,716,000 new cars were registered. In the first six months of 1936, 2,171,000 were registered, and it is estimated that during the first six months of 1937, the registration of new cars was 2,472,000.

"Not only has there been this progressive increase in the number of automobiles, but there has also been an increase in their use as shown by the fact that the annual consumption per car of 705 gallons in 1933 increased to 727 gallons in 1934, to 747 gallons in 1935, to 779 gallons in 1936. In considering this increase, it should be observed that the registration of trucks has been running somewhat higher during the past year in proportion to the number of passenger cars, but there are, nevertheless, very strong indications that owners of passenger cars are using them more than they did."

Unprecedented consumption of petroleum this year has resulted in new peaks of crude production and refinery activity and the most drilling for over 10 years.

Results in

Of 1937 Indicate a

By L. J. LOGAN

THE remarkably favorable showing that the oil industry is making this year is revealed strikingly in statistics now available on the first half of the year. From some angles, the half-year figures look like full-year statistics, in comparison with the results of some recent years.

Running at the highest levels ever known, the heavy consumption of petroleum this year has made necessary record production of crude oil, unprecedented refinery output, and the most drilling for many years.

Crude Production Large

In the first six months of 1937, crude oil production, largely used up as rapidly as obtained, was not far under the total for the whole year 1932, and exceeded the annual production for 1922 and earlier years. The national crude production of 614,776,650 barrels in the first half of 1937 was 17 percent greater than in the similar period of 1936. In all of 1932, at the bottom of the depression, the crude output of the country was but 785,159,000 barrels.

Record Demand This Year

Those figures on production reflect fairly accurately, moreover, the trends of petroleum demand; for since 1930 the crude oil production has been closely balanced with demand, although the output as a rule has been somewhat under consumption, as shown by withdrawals from crude storage.

Drilling Activity Great

From the standpoint of drilling, even more than from the viewpoint of production and demand, the statistics for the first half of 1937 look like annual figures in comparison with those for some of the recent depression years.

Showing a 16 percent increase over the comparable period last year, drilling in the first six months of 1937 was greater than for either of the full years, 1931 or 1933. In the half-year, 13,474 wells were completed in the United States, as compared with only 11,700 in all of 1933 and 11,716 in 1931. The 1937 half-year furnished almost as much drilling as all 1932, when 14,290 wells were completed.

Most Completions Since 1926

If the 16 percent increase in drilling over last year should be maintained through the latter half of this year, 1937 would show 27,750 wells completed. That would be the most since 1926, when 28,995 wells were finished. Even if the latter half of this year shows a less sharp increase over last year, 1937 almost certainly will be the most active year of drilling since 1926. For such a distinction for 1937 may be gained by surpassing the 23,919 completions of 1936 and the 23,463 of 1929.

United States Drilling and Production in First 6 Months of 1937 and 1936

STATE OR DISTRICT	WELLS COMPLETED			BARRELS OF CRUDE PRODUCTION		
	In 1937 (6 Mo.)	In 1936 (6 Mo.)	Percent Change	In 1937 (6 Months)	In 1936 (6 Months)	Percent Change
Arkansas	41	43	— 5	4,919,600	5,433,300	—10
California	718	559	+ 29	111,638,200	108,062,708	+ 3
Colorado	6	6	.....	728,700	810,750	—10
Eastern States	1,473	1,554	— 5	21,090,300	19,171,850	+10
Kansas	1,200	761	+ 58	33,721,250	26,829,900	+26
Louisiana	401	515	— 22	44,743,950	37,379,000	+20
North Louisiana	173	291	— 40	13,632,550	12,052,850	+13
South Louisiana	228	224	+ 2	31,111,400	25,326,150	+23
Michigan	412	374	+ 10	6,894,050	6,509,350	+ 6
Montana	76	62	+ 22	2,908,200	2,527,900	+15
New Mexico	349	268	+ 30	18,832,200	11,754,000	+64
Oklahoma	1,521	1,389	+ 10	113,599,100	96,020,750	+18
Southeastern States	7	7	.....	.....	.....	.....
Texas	7,217	6,046	+ 19	246,454,950	202,777,100	+22
East Texas Field	1,057	1,445	— 27	82,581,750	79,998,200	+ 3
Rest of East Texas	521	174	+193	20,870,600	11,093,000	+88
North Texas	1,199	1,062	+ 13	12,549,400	10,559,000	+19
South Texas	1,832	1,572	+ 17	*39,799,900	*13,822,650	+34
Texas Gulf Coast	710	554	+ 28	*35,623,900	*42,489,250	
Texas Panhandle	330	331	— ½	13,794,000	11,093,000	+24
West Texas	1,349	656	+106	35,300,600	31,147,900	+13
West Central Texas	219	252	— 15	5,934,800	4,582,250	+30
Wyoming	53	28	+ 89	9,246,150	6,438,300	+44
Total United States	13,474	11,612	+16	614,776,650	523,714,908	+17

*Fields of Corpus Christi district, now included with South Texas, were shown in Texas Gulf Coast in 1936.

First Half a Record-Breaking Year

Latter half of year promises to bring continuation of favorable earnings that prevailed in first six months, with prices good and business volumes large.

Associate Editor

Profits at 1929 Levels

Earnings of oil companies, the measure of success for the industry, in the first six months of this year also appear like full year results, in comparison with records for some recent years.

Runnnig at about the same levels as in 1929, an exceptionally profitable year, oil company earnings in the first half of this year were greater than for all 1932 or several succeeding years, and contrasted with losses generally in 1931.

Latter Half Prospects Good

For the latter half of 1937, moreover, the outlook is encouraging, promising an extension of the favorable trends and results of the first six months.

The industry occupies an exceptionally good statistical position, with inventories small; and it is indicated that this favorable position will be maintained at least for

United States Gasoline Stocks

Finished and Unfinished

(From Bureau of Mines Reports, Figures indicate barrels)

At End of Month	1935	1936	1937
January	58,605,000	62,613,000	71,416,000
February	64,888,000	71,604,000	78,413,000
March	66,290,000	74,485,000	81,651,000
April	58,218,000	73,509,000	80,667,000
May	61,483,000	71,605,000	*78,758,000
June	59,507,000	67,377,000	†75,427,000
July	56,446,000	62,446,000	.....
August	45,932,000	59,496,000	.....
September	51,334,000	57,800,000	.....
October	49,798,000	57,662,000	.....
November	52,046,000	58,799,000	.....
December	56,693,000	62,885,000	.....

* Stocks May 29, as estimated by the American Petroleum Institute.
† Stocks June 26, as estimated by the American Petroleum Institute. The similar figure for July 3 was down further to 74,672,000 barrels.

Stocks of All Oils in the United States

At end of each year since 1918, and at end of each month in past year.

(Bureau of Mines Figures)

DATE	BARRELS				Days' Supply
	Crude Oil	Natural Gasoline	Refined Products	Total Stocks, All Oils	
End of Year:					
1918	.....	.....	.....	193,411,000	165
1919	.....	.....	.....	200,383,000	164
1920	.....	.....	.....	209,845,000	156
1921	.....	.....	.....	294,428,000	203
1922	.....	.....	.....	385,349,000	239
1923	.....	.....	.....	492,088,000	235
1924	.....	.....	.....	520,287,000	236
1925	.....	.....	.....	552,464,000	239
1926	.....	.....	.....	527,084,000	210
1927	.....	.....	.....	597,176,000	231
1928	.....	.....	.....	621,010,000	223
1929	.....	.....	.....	†689,497,000	228
1930	411,882,000	3,100,000	251,680,000	666,662,000	224
1931	370,194,000	2,825,000	258,879,000	631,898,000	221
1932	339,875,000	3,203,000	249,116,000	592,194,000	230
1933	354,223,000	3,680,000	244,295,000	602,198,000	226
1934	337,254,000	3,740,000	223,356,000	564,350,000	199
1935	314,631,000	3,698,000	223,371,000	541,700,000	166
End of Month:					
January, 1936	313,081,000	3,936,000	224,318,000	541,335,000	174
February	310,812,000	4,218,000	228,214,000	543,244,000	179
March	313,189,000	4,553,000	231,063,000	548,805,000	183
April	315,389,000	5,058,000	230,672,000	551,119,000	171
May	315,169,000	5,664,000	233,590,000	554,423,000	173
June	311,046,000	5,829,000	233,421,000	550,296,000	161
July	306,390,000	5,846,000	233,262,000	545,498,000	161
August	301,757,000	5,653,000	234,756,000	542,166,000	157
September	295,693,000	4,945,000	231,842,000	532,480,000	146
October	292,271,000	4,555,000	230,605,000	527,431,000	148
November	288,998,000	4,153,000	229,122,000	522,273,000	149
December, 1936	288,184,000	4,055,000	226,407,000	*518,646,000	‡146
January, 1937	286,759,000	4,032,000	229,340,000	520,131,000	155
February	289,972,000	4,290,000	232,314,000	526,576,000	158
March	297,496,000	4,799,000	231,847,000	534,142,000	152
April	304,161,000	5,292,000	230,755,000	540,208,000	149
Trend of Crude Stocks since end of April; from Bureau of Mines weekly reports.					
May 29	305,745,000	.....	.....	.....	...
June 5	307,223,000	.....	.....	.....	...
June 26	307,679,000	.....	.....	.....	...

† The stocks continued rising in first five months of 1930, reaching a peak of 700,808,000 barrels, May 31, 1930
* Smallest for nearly 13 years, or since March 31, 1924, when total was 511,894,000 barrels.
‡ Smallest for 16 years, or since November 30, 1920, when stocks represented 144 days' supply.

several months, as the balancing of production with demand currently is successful and likely will continue so for some time.

Oil Demand High

Helping to bring success in the balancing of production with demand this year is the unprecedented consumption of petroleum and petroleum products. Although 1936 brought a new record in oil consumption, the demand this year is running around 10 percent higher. The increased consumption embraces most of the petroleum products.

Gasoline consumption has been running about 10 percent above last year's levels. Fuel oil demand is up substantially, reflecting greater use of Diesel engines, as well as added installations of oil burners for domestic and industrial use.

There has been greater consumption this year than last year also for kerosene, lubricants, wax, asphalt, and road oil.

Production Increased

In meeting the heavy consumer requirements, the oil industry has been obliged to push crude oil production to unprecedented proportions this year. Meanwhile, some difficulty was experienced in accurately forecasting the crude oil requirements, and for about four months this year, from February through May, the output of the wells was permitted to run ahead of the consumer demand. Consesequently after dropping in late January to the lowest level for 13 years, crude oil stocks were increased about 20,000,000 barrels before a better balance between production and demand was restored at the beginning of June.

Effective Control Restored

However, the production during June conformed fairly closely with the demand, and for July a continuation of the successful control is promised.

Furthermore, it appears likely that the effective regulation of crude production will be extended at least several months.

Markets Firm

Despite the temporary overproduction of crude several months this year, the markets have held up steadily, and the improved prices established early in the year have been maintained.

Crude prices were increased about 10 percent in late January, and proportional advances were made in the prices of refined products.

Higher Prices Possible

However, the temporary overproduction of crude perhaps was at least partially responsible for failure of prices to show additional improvement.

Hopes for further price gains still persist, nevertheless, and it appears possible that the hopes may be fulfilled this summer.

Additional price increases are needed to compensate for higher costs of labor and materials, it is contended; and higher prices could be maintained, in view of the heavy demand, low inventories, and effective balancing of current production with current consumption.

Some Prices Up

Undoubtedly, the crude-oil market is exceptionally strong at prevailing price levels, as demonstrated by recent increases of postings in various districts, affecting different grades of crude. The most recent upward revision was that of last week in the Refugio and Mirando districts, South Texas, increasing heavy oils 1 to 6 cents a barrel, although leaving prices of the lighter oils unchanged.

A few weeks previously, Pennsylvania grade crudes were increased 15 cents a barrel, and oil from the East Texas field was advanced 8 cents a barrel.

These various local increases indicate that crude prices in general are tending to advance.

If and when the gasoline market improves in coming weeks, the crude prices possibly will break

United States Drilling and Production, June, 1937, and Cumulative for Year

STATE OR DISTRICT	MONTH OF JUNE, 1937						CUMULATIVE, JANUARY THROUGH JUNE, 1937					
	*Completions	Oil Wells	Gas Wells	Failures	Initial Prod. Bbls. Daily	Total Bbls. Oil Prod.	*Completions	Oil Wells	Gas Wells	Failures	Initial Prod. Bbls. Daily	Total Bbls. Oil Prod.
Arkansas	9	4	1	4	2,553	849,250	41	13	1	27	3,368	4,919,600
California	141	107	....	34	48,977	19,759,400	718	546	9	163	270,781	111,638,200
Colorado	....	....	....	....	.....	116,150	6	1	....	5	2,400	728,700
Eastern States	295	122	104	69	7,973	3,608,500	1,473	427	675	371	14,339	21,090,300
Illinois	21	17	1	3	6,024	.....	58	36	4	18	6,705	.....
Indiana	13	4	3	6	135	.....	58	19	10	29	291	.....
Kentucky	52	28	10	14	906	.....	131	69	20	42	2,568	.....
New York	2	....	....	2	.....	.....	6	....	2	4	.....	.....
Ohio	110	42	36	32	701	.....	704	190	324	190	3,385	.....
Pennsylvania	13	5	5	3	67	.....	81	24	38	19	793	.....
West Virginia	84	26	49	9	140	.....	435	89	277	69	597	.....
Kansas	249	167	13	69	237,667	5,860,100	1,200	875	45	280	1,106,259	33,721,250
Louisiana	93	63	7	23	29,058	7,629,550	401	263	28	110	116,882	44,743,950
North Louisiana	53	39	6	8	14,240	2,454,800	173	122	18	33	42,726	13,632,550
South Louisiana	40	24	1	15	14,818	5,174,750	228	141	10	77	74,156	31,111,400
Michigan	66	59	3	4	9,994	1,283,050	412	244	48	120	110,933	6,894,050
Montana	25	24	....	1	1,416	509,500	76	63	5	8	5,037	2,908,200
New Mexico	61	57	3	1	79,069	3,438,000	349	325	12	12	581,800	18,832,200
Oklahoma	246	165	9	72	151,577	19,025,500	1,521	1,073	73	375	1,357,654	113,599,100
Southeastern States	....	....	....	....	.....	.....	7	....	....	7	.....	.....
Alabama	....	.....	....	....	.....	.....	1	....	....	1	.....	.....
Florida	....	.....	....	....	.....	.....	....	....	....	....	.....	.....
Mississippi	....	....	....	....	.....	.....	6	....	....	6	.....	.....
Texas	1,313	1,003	56	254	1,328,029	42,110,700	7,217	5,433	240	1,544	7,603,319	246,454,950
East Texas Field	189	184	2	3	852,500	13,943,600	1,057	1,018	2	37	4,609,353	82,581,750
Rest of Eastern Texas	100	84	6	10	49,868	3,672,900	521	453	20	48	282,863	20,870,600
North Texas	242	118	5	119	18,928	2,174,450	1,199	642	13	544	109,191	12,549,400
South Texas	308	224	18	66	86,347	6,931,750	1,832	1,278	71	483	520,020	39,799,900
Corpus Christi Area	124	96	7	21	53,702	.....	740	578	19	143	336,104	.....
Laredo Area	118	83	9	26	17,052	.....	826	544	48	234	134,995	.....
San Antonio Area	66	45	2	19	15,593	.....	266	156	4	106	48,921	.....
Texas Gulf Coast	120	89	11	20	41,012	5,961,450	710	516	40	154	201,591	35,623,900
Texas Panhandle	58	46	12	....	21,826	2,492,050	330	246	70	14	121,188	13,794,000
West Texas	257	241	1	15	256,385	5,938,150	1,349	1,197	6	146	1,752,445	35,300,600
West Central Texas	39	17	1	21	1,163	996,350	219	83	18	118	6,668	5,934,800
Wyoming	7	6	....	1	9,822	1,498,800	53	38	3	12	30,564	9,246,150
Total, United States	2,505	1,777	196	532	1,906,135	105,688,500	13,474	9,301	1,139	3,034	11,203,336	614,776,650

*June completions cover not the calendar month, but the four weeks or 28 days, ended June 26.

into higher ground on a nation-wide scale.

Profits Show Improvement

The favorable earnings of oil companies this year have been based on large volumes of business, attending the record consumption of petroleum, as well as the favorable prices that have accompanied effective control of production and stable markets.

For the latter half of this year, business volumes likely will continue to show increases over the comparable periods last year, and prices similarly promise to be better, even at prevailing levels, while further improvement is a distinct possibility. It is indicated, consequently, that profits for the latter half of the year will show as much improvement over the comparable period last year as they showed in the first six months.

Inventory Position Good

As the oil industry reached the middle of 1937, it still occupied an exceptionally good inventory position, despite the substantial additions to storage during several months of the year.

Crude oil stocks June 26, 1937, aggregating 307,679,000 barrels, were nearly 20,000,000 barrels larger than on January 1. But that addition to storage was not as great as the withdrawal had been in the latter half of 1936. Consequently, the stocks of 307,679,000 barrels on hand June 26 this year were smaller than the 311,046,000 barrels held at the end of June last year.

Since demand currently is around 10 percent larger than at this time last year, moreover, the present crude oil inventories are even farther under a year ago, in terms of days' supply.

Present stocks of refined products, similarly, compare favorably with those held at this time last year.

Stocks of finished and unfinished gasoline on hand June 26, this year, totaling 75,427,000 barrels, were 10.2 percent larger than the 68,221,000 barrels held June 27, 1936. But that gain in stocks is justified by the increase that has occurred in gasoline consumption. The demand for gasoline has been running around 10 percent higher this year than last year, and for July the Bureau of Mines has estimated that an increase of 12 percent will be shown.

Gas and fuel oil stocks present an even more favorable picture than the gasoline stocks. The total storage of gas and fuel oils June 26, 1937, amounted to 100,395,000 barrels, which was about 5,000,000 barrels less than the 105,285,000 barrels held one year previously. This decline in stocks from a year ago is doubly significant, since demand is greater than last year. The fuel oil market naturally is strong, in view of this inventory situation; and attractive prices are in prospect for this fall and winter, when the heavy consuming period arrives.

Stocks of other refined products similarly are moderate.

The favorable inventory position with regard to refined oils is being maintained consistently, moreover, as refinery operations continue in line with market requirements.

Figures now available on results in June indicate that the month brought a pronounced improvement in the control of crude oil production.

Effective June 1, the leading producing states established stricter crude production allowables, more nearly conforming with the Bureau of Mines forecasts of demand.

In consequence, crude production was brought down virtually in balance with demand, and the running of crude to storage was practically eliminated. The crude stocks totaled 307,223,000 barrels on June 5, and they increased only to 307,679,000 barrels in the three weeks from then to June 26.

Averaging 3,522,950 barrels daily, United States crude oil production in June showed a smaller excess over the Bureau of Mines estimate of demand than in any other month this year. The June output was 156,950 barrels daily above the indicated demand, as compared with an excess of 206,805 barrels daily in May.

Among the various states, California showed the largest excess, one of 72,747 barrels daily, while Texas over-produced 49,690 barrels daily, showing the next largest excess. Other leading producing states

[*Continued on page 57*]

Average Daily Number of

Wells Completed in the United States

(Including Oil Wells, Gas Wells, and Dry Holes)

MONTH	1933	1934	1935	1936	1937
January	30.0	39.7	47.9	52.4	66.1
February	30.6	38.1	49.6	51.6	58.6
March	26.6	40.6	48.8	60.6	70.4
April	25.5	44 0	58.5	69.2	78.1
May	25.6	50.7	63.6	71.9	80.8
June	21.1	51.5	58.6	70.9	89.5*
July	23.1	53.6	60.9	66.6	....
August	30.7	51.3	62.8	70.4	....
September	36.5	43.2	57.9	65.4	....
October	40.9	49.6	57.1	67.8	....
November	46.9	49.9	55.2	67.7	....
December	47.7	48.3	54.2	67.7	....

* Most drilling in many years, surpassing even the peak of the 1920's, that was reached in September, 1926, when completions averaged 88.6 wells daily, with 2480 completions reported in a 28 day period.

Excesses of Average Daily Crude Production Above Bureau of Mines Recommendations in Past Six Months

(Barrels Daily)

Note: Production figures calculated from American Petroleum Institute Weekly Reports.

MONTH	California	Kansas	Louisiana	New Mexico	Oklahoma	Texas	Other States	United States
January, 1937:								
Production	589,374	169,068	244,523	92,365	587,316	1,252,056	238,688	3,173,390
Demand	559,900	165,600	216,300	79,800	573,100	1,176,000	227,700	2,998,400
Excess	29,474	3,468	28,223	12,565	14,216	76,056	10,988	174,990
February, 1937:								
Production	587,793	177,989	243,598	96,896	605,143	1,323,775	242,534	3,277,728
Demand	573,300	170,000	225,100	81,600	581,900	1,203,400	233,300	3,068,600
Excess	14,493	7,989	18,498	15,296	23,243	120,375	9,234	209,128
March, 1937:								
Production	589,439	186,731	245,115	102,229	627,763	1,392,742	251,087	3,395,106
Demand	570,900	178,000	240,000	88,200	590,700	1,256,600	234,600	3,159,000
Excess	18,539	8,731	5,115	14,029	37,063	136,142	16,487	236,106
April, 1937:								
Production	621,226	191,426	248,826	105,510	657,586	1,380,008	260,601	3,465,183
Demand	579,900	183,000	244,800	91,400	609,600	1,297,900	236,400	3,243,000
Excess	41,326	8,426	4,026	14,110	47,986	82,108	24,201	222,183
May, 1937:								
Production	653,048	196,534	246,447	112,289	653,690	1,415,466	262,231	3,539,705
Demand	583,300	187,100	249,400	99,800	622,700	1,340,800	249,800	3,332,900
Excess	69,748	9,434	*2,953	12,489	30,990	74,666	12,431	206,805
June, 1937:								
Production	658,647	195,337	254,318	114,600	634,183	1,403,690	262,175	3,522,950
Demand	585,900	190,700	252,000	102,000	625,300	1,354,000	256,100	3,366,000
Excess	72,747	4,637	2,318	12,600	8,883	49,690	6,075	156,950

*Under-production.

Export Outlook Better

Thompson explains to European governments and company officials at Paris conferences how to strengthen connections in United States for crude and refined oil products.

By R. W. BYRAM, Associate Editor

THE full aspect of the European oil situation, especially in relation to the United States, was developed at a series of conferences held in Paris during the course of the Second World Petroleum Congress.

Ernest O. Thompson, chairman of the Interstate Oil Compact Commission and member of the Texas Railroad Commission, took advantage of these private meetings to outline conditions in the United States and to explain to European oil men how they might more easily strengthen their connections in America.

Because most of the crude now available in Europe is held by major companies, independent refiners and government officials were especially interested in learning how oil might be obtained in America. Thompson pointed out that this could be done by establishing relations with independent producers, especially with those whose production is relatively near tide water.

Explains Conservation Program

An effective conservation program limiting production to demand had not been fully understood, especially in conjunction with a program to prevent waste of oil or gas in the field. Most interest was observed in pressure charts indicating the relation between withdrawals from a large reservoir, such as East Texas, and the depletion of the inherent reservoir energy. Rumania is the only European country where such a system might have been established, and so far the government has failed to put such a plan into operation.

Most of the fields operated in other countries are handled by only one or two companies who operate the field as a concession, so that any conservation program depends in a large measure upon the desire of the operators.

Europeans were highly interested in a stabilized source of supply such as is now available in Texas. Official explanations from Thompson lent authority to statements concerning the size of the reserves, and the representatives of foreign countries were especially interested in the fact that such a program extended into several of the larger states producing oil in America, and was not limited to any local area.

Rumania Controls Price

While the commissioner declined to discuss the price to be paid for oil, pointing out that American properties were privately owned and that this was a matter with which he was not concerned, these conferences developed the fact that the price of Rumanian production was the dominant factor in Europe, and that oil from abroad must be able to compete with the price paid for that crude.

However, because of the depletion of Rumanian reserves, it appeared that a higher price would be likely within a year or two, especially as the demand is increasing in spite of high taxes, and a larger supply must be had from sources upon which the purchaser can depend. This is necessary, especially, if an independent refining industry is to be developed in Europe.

Most government officials indicated that independent refineries must be had if for no other purpose than to prevent major companies from dominating the price of gasoline. Trusts seem to be fear far more in Europe than they are in America, even in those countries controlled by dictators. While these rulers may fix the price of any product, they are unable to force the larger concerns to send in crude or refined products in the event that prices established prove to be unprofitable and the majors choose to withdraw.

HONORED BY CONGRESS

LOUIS PINEAU

Head of the French government oil control who was named president of honor at the Second World Petroleum Congress in Paris.

America's Export Outlook Good

From the statements made during the course of these private meetings it is not illogical to conclude that the European market for American production may be expanded during the next year or two until these countries will be buying 50,000 or 100,000 barrels daily from Texas alone. Such purchases would inevitably lead to larger sales from the other oil producing states, especially Oklahoma, Louisiana, and Kansas, whose crude would be substituted in Texas for the oil shipped to foreign markets.

The principal deterrent to such an increase would be the limited supply of tankers available to transport the oil. However, shippers asserted that there are now enough ships to handle a substantial increase, and expressed the opinion that others would be built quickly if the demand for them existed.

Next Congress

That another World Petroleum Congress will be held within the next three or four years appears certain. The large attendance, over 1600, at the Paris meeting, combined with the value of the papers presented, established beyond all doubt the desirability of such conferences. The permanent committee named to prepare for the next meeting assures better organization in the future and should do much to eliminate the unavoidable confusion which existed in Paris.

Speaking privately after the meetings, delegates to the congress indicated their preference for a meeting in America. They pointed out that nowhere else could they study the advanced phases of production and refining that could be found there, conditions which do not exist in Europe. For that reason the failure to accept the invitation to come to Tulsa in 1940 should not be regarded as a refusal; no other place was named. Since the permanent bureau provided is to determine the place and date of the next meeting, Tulsa may be chosen.

The fact that the Tulsa invitation was extended by "The International Petroleum Exposition" rather than by a scientific body was distasteful to some of the European delegates. They appeared to feel that to accept an invitation from such an organization would lend a color of commercialism to the event which has so far been purely

scientific. It was expressed that this difference was apparent in the papers delivered by European scientists who limited their remarks to a report of unusual and interesting studies they had made. Some said many of the American papers rather obviously advertised some product or company and contributed little to the scientific knowledge of the industry.

The first World Petroleum Congress was organized by the Institute of Petroleum Technologists whose headquarters are in London and whose membership is purely scientific; the Second Congress, held this June in Paris, was sponsored by the Association Francaise des Techniciens du Petrole, the French organization which corresponds to the English I.P.T. The latter meeting was supported by a grant from the government which the English did not have, but avoided the sponsorship of oil companies or supply companies who might have benefited from their contributions.

Should an invitation be presented to the committee from some American scientific association or group of associations, such as the A.A.P.G. or the A.I.M.E., it would undoubtedly be looked upon far more favorably. Under this aegis European scientists would be more likely to attend, and would gladly take advantage of the opportunity to attend any exhibitions of equipment which were open during the course of the meetings. Since there are two American members of this committee, Dr. Gustav Egloff and Dr. W. P. Hayes, both of whom are recognized as outstanding scientists, there should be little difficulty in presenting such an invitation in its most favorable light should Americans desire the meeting.

The fact that the official American delegates named by the department of state were specifically prohibited from sponsoring the invitation also contributed to some extent to the failure of the convention to accept. Before final action is taken, this prohibition may have been removed and an official invitation from Washington may add its weight.

Search for Production

Each of the European countries is vigorously engaged in a search for new crude reserves, especially within the boundaries of the state itself. While each has a primary interest in obtaining a supply at home that can be had at low cost, back of every move is the determination to establish reserves that will be available should war ensue. Large supplies of crude are held in storage, but it is no military secret to point out that these are exceedingly vulnerable, especially to attacks from the air, and while Germany is said to have supplies stored underground, such a program has not been put into operation in the other countries. It is, however, under consideration, and it seems likely that such underground storage tanks will be constructed within the next two or three years.

England Relies on Imports

While the English have large reserves of crude in the colonies, there is only one well producing in the British Isles. Last year 18,000 barrels, approximately, came from this source and was sold at a high price. The reserve, however, is small, and production is from a crevice only. The country relies entirely on its production beyond the seas for crude, and large quantities of finished products are shipped in from refineries abroad.

The English, like the French, have come to recognize the hazards of transporting supplies through the Mediterranean Sea in the event of war. Despite British control of Suez and Gibraltar, Italy has become a force whose power must be recognized as a deterrent to shipping should she become an enemy instead of an ally. German submarines have found their way to Spain easily, and in the course of an extended conflict could do untold damage to freighters.

Thus Britain recognizes the need for oil at home. To this end two deep tests have been drilled and there is one well now being drilled upon which one of the larger companies is pinning some hope. Large concessions have been granted to other concerns for prospecting in the southern part of the island, and other tests will undoubtedly be drilled immediately.

Despite the fact that some small quantities of oil and gas have been found in the isles, it is the general opinion that the entire area has been denuded of formations which might be expected to produce. Granite is at the surface in some areas, and in other spots exposed surface rocks are of an age found below those formations which produce oil in other countries.

Colonel Thompson conducted a series of conferences at his hotel during the congress, at which representatives of French, Italian, and Belgian governments appeared and discussed freely their situation in regard to oil. There were also numerous representatives of European oil companies, oil buyers and refiners, both independent and major, who made this their headquarters. The latter group included German and English, so that a cross-section of the condition of each country was presented. At these meetings Thompson presented the author as his technical advisor, so that the conferees had no fear of being quoted directly and commented openly on all phases of the industry. For that reason no direct quotations are contained in Byram's story, but the information comes from the highest authorities.

Large New Iranian Field

Abroad, however, operations have been decidedly successful. In an official statement on the condition of the Anglo-Iranian Oil Company, Sir John Cadman pointed out that:

"I am happy to inform you that in our search for further producing areas we have been successful in proving oil at Gach Qaraghuli, which lies some 125 miles southeast of Haft Kel and 155 miles east of Abadan. The first well to prove important production entered the Asmari limestone at 3364 feet, and gave production of about 400 tons (3000 barrels) a day. The well is being deepened to explore the thickness of reservoir rock, which seems to be somewhat greater than in our present fields.

"In the meantime, another well on the opposite flank of the structure has been drilled into the limestone and on test it has produced oil at a rate equivalent to a daily output of over 4000 tons (30,000 barrels). Although it is yet early to forecast, it seems likely, on geological, geophysical and drilling evidence, that this field will develop into an area of similar dimensions to those of Masjid-i-Sulaiman . . ."

Many English observers were of the opinion that the statement issued constituted a fairly conservative report of the actual results obtained, and declared they expected the field to be far larger than was reported.

Thus Britain is assured of an adequate supply held by one of her own major producing companies, a supply which will unquestionably be developed and brought to market. Only the intervention of war would prevent this oil from reaching the Isles themselves, and this situation is unlikely to arise so long as the Mediterranean route remains open.

There appears to be no active group of independent refiners operating in Britain which would require crude purchased in the open market, and each of the major companies has adequate sources upon which to draw now.

Belgium finds herself, so far as the independent is concerned, in the same position as the French refiner, which means that she must look to independent sources of supply in the United States for oil with which to continue operations. In some instances government contracts require continued operation of the plant at 70 percent capacity, or higher, which means that these supplies must be found at once.

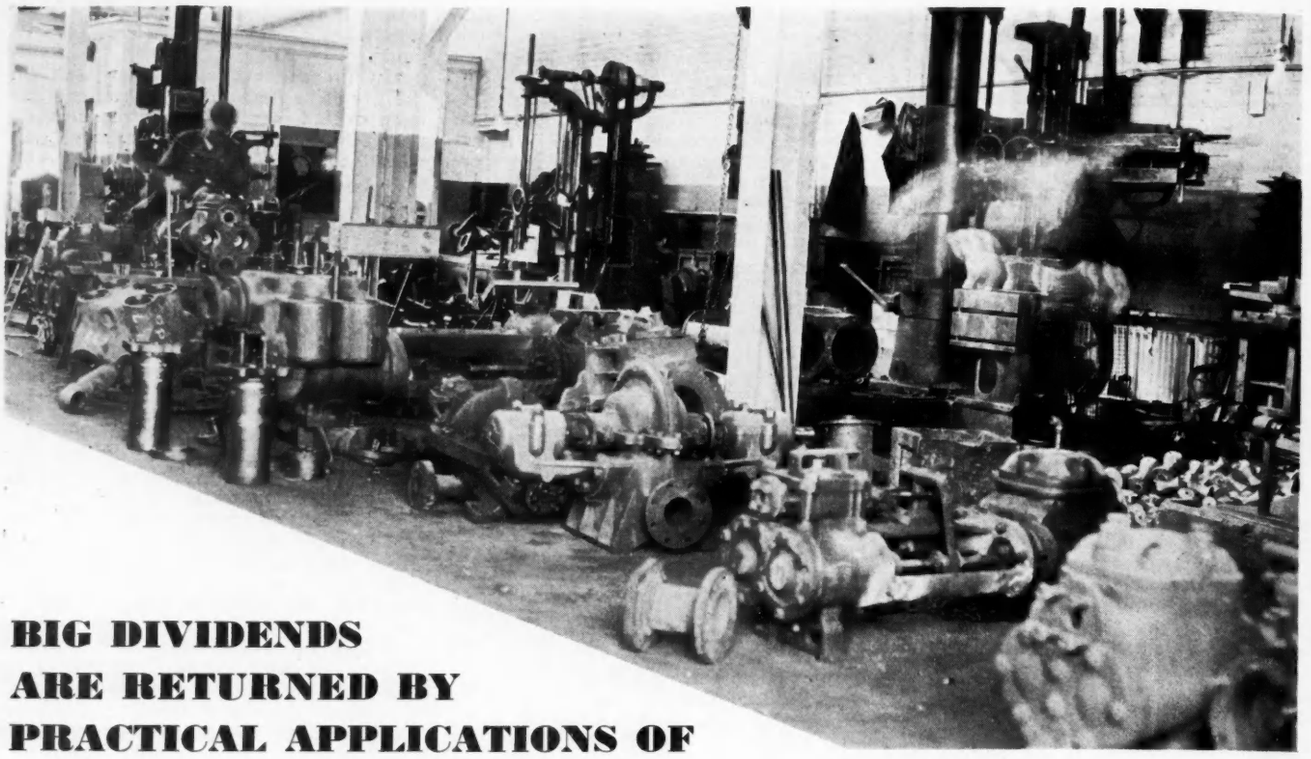
France's Position Difficult

Never free from the threat of war, and surrounded by formidable adversaries, France seems to be in the most difficult position. Determined efforts have been made to establish a refining industry controlled by the government, but independent of major company supplies, but this program has been hampered seriously by the declining Rumanian production and the failure of efforts to produce oil within France itself.

Mining operations are maintained, but unprejudiced observers declare that the cost of labor alone exceeds $2.50 per barrel. Tunnels are dug through the layer of rock immediately above the producing horizon, which constitutes the most expensive phase of the operation. Holes are then drilled downward into the producing sand which is found in relatively small pockets, and pipes are inserted through which the oil is permitted to flow into sumps from which it is collected later.

Because of the comparative simplicity of this method of operation, it is readily apparent that no great volume of gas is encountered. Such an operation cannot, therefore, be depended upon to furnish any great supply of crude, a supply commensurate with the needs of 40,000,000 people, even though there is only one motor car to each 27 persons, and some alcohol is injected into much of the gasoline. While this latter process reduces the efficiency of the gasoline, cars con-

[*Continued on page 60*]



BIG DIVIDENDS ARE RETURNED BY PRACTICAL APPLICATIONS OF

Maintenance For Water

IMPROPER care and attention to minor equipment adds many thousands of dollars yearly to the red side of the ledger. Small repair items are too frequently overlooked, and charged to general operation. In this general category, the water pump is an important investment, whether in the field or doing station service.

There are specific problems in the maintenance of pump units that are not encountered in any other equipment. Close observance to fundamental upkeep in addition to a regular inspection program is necessary to avoid high replacement cost, exorbitant depreciation and poor efficiency. Thorough investigation of failures has proven that approximately 80 percent of reported water pump failures were due to neglect and abuse rather than to an inherent weakness of the particular part or unit. In a majority of the remaining cases the use to which the pump had been put was not that for which it had been designed.

The fact that a pumping unit is in reality a minor installation expense makes it a matter that can be overlooked easily. A comparison of the initial costs of water pumps and major units is the more obvious one, the fact that there are many more water pumps in service than large units is too often disregarded. Slipshod methods are rapidly becoming a thing of the past and no detail of maintenance can be ignored.

Proper Selection First Need

In selecting a pump for a particular service it is essential to know the physical limitations of a pump, the ranges and conditions under which it must operate, and the strains to which it will be subjected. A consideration of these facts is paramount in making a selection. The disregard of these fundamentals may result in a unit doing a duty for which it was not engineered, and although it may operate efficiently, it is far more subject to strain and mechanical failure than a unit of proper design.

Overloading strains, high-speed fatigue, excessive wear and depreciation, and corrosive deterioration are all products of misapplication or poor selection of a water pump. The figuring of the head which entails the entrance loss, the temperature of the water, the loss in friction and the speed necessitated for the required output, the chemical content of the water and the altitude—all must be considered in the selection or the application of a pump.

In installation, by no means should any adjust-

On the opposite page is shown a line of water pumps of various sizes and types in a machine shop ready for repairs. The expense of changing and replacing broken or worn parts is a major item in pump operation cost. In addition to these apparent expenses other associated costs are transportation of unit, downtime, bookkeeping, storage, etc.

EIGHTY PERCENT of water pump failures are due to neglect and abuse, and may be materially reduced by simple systematic inspection and care described.

By WAYNE VARLEY, Tulsa, Oklahoma

Methods Pumps

ment seem too trivial. It is often this trifle that proves the disruptive factor in the proper functioning of the pump. It is advisable if not thoroughly familiar with the water pump, especially those of larger output, to have the installation of the pump supervised by an engineer of the manufacturer's staff.

One safeguard against vibration is a good foundation for the pump. Vibration exerts terrific and continued shock on the equipment, throws it off balance and places excessive stress upon the moving or rotating elements. Damage of a serious nature is easily possible and the life of the pump parts becomes a matter of pure luck.

Troubles of the same nature are evident in misalignment, a major evil in maintenance work. Alignment is absolutey essential in the successful operation of a pump. Misalignment greatly augments the failure of a unit as exemplified by the binding of pump parts, hot bearings, worn parts, and as a cause of vibration. Do not depend on a flexible coupling to compensate for misalignment. It will only eliminate the transmission of end thrust from one unit to the other and alleviate a slight misalignment which may normally occur during the operation of the pump. Misalignment has its source in poor installation, pipe strain, worn couplings, loosened bed bolts and vibration. Consequently, such matters should receive careful and regular attention. The support of the piping should be entirely independent from that of the pump.

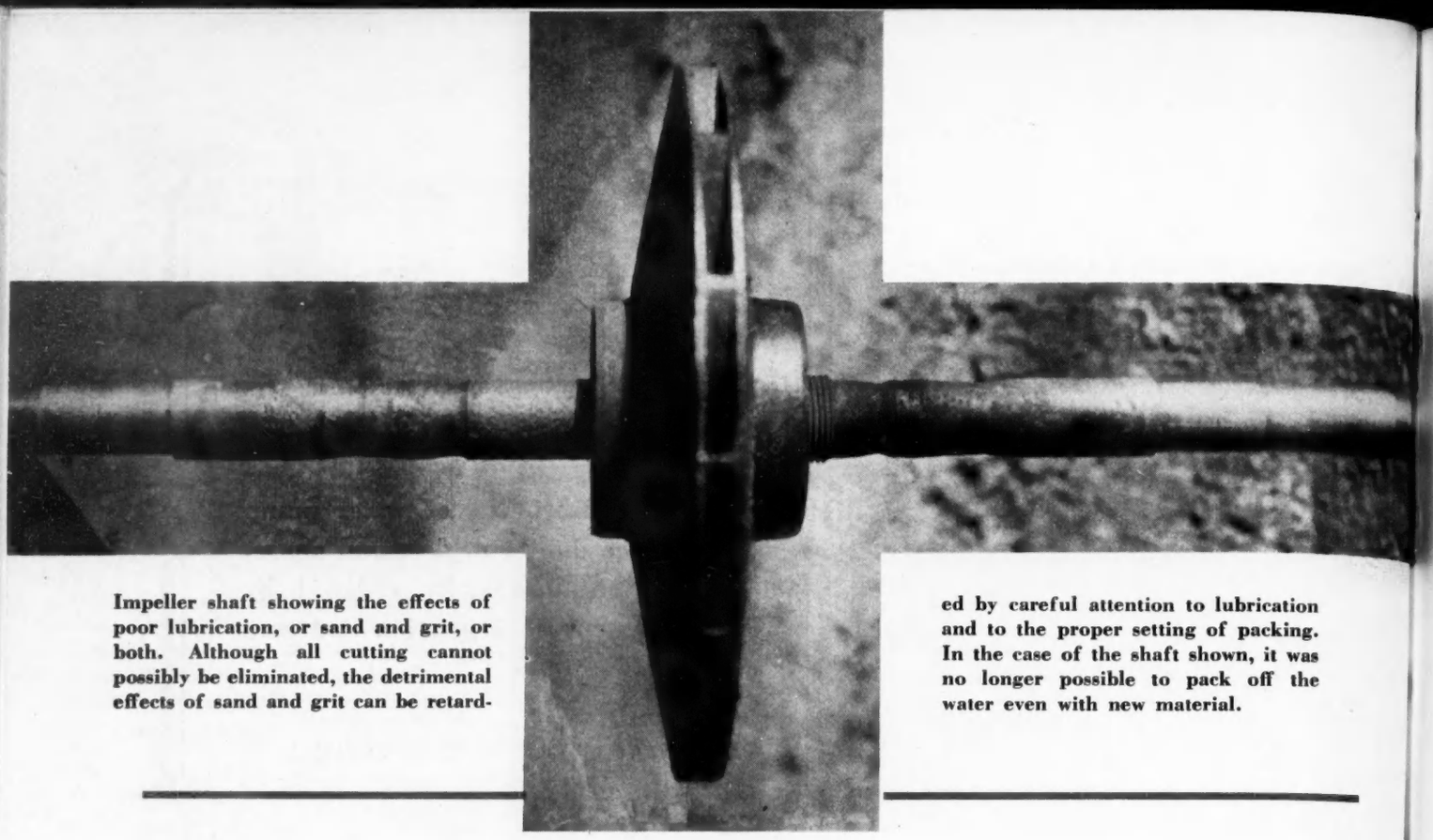
A systematic inspection will ascertain the condition of a pumping unit and reveal unsuspected defects. The information obtained should be applied at once before real trouble develops. If a policy of waiting is followed the repairs will be of a far more serious nature.

Every manufacturer of pumps wishes his products to appear to the fullest advantage. For this reason the manufacturer has, at considerable expense, formulated and placed at the disposal of the buyer, engineering advice and instructions attained from numerous tests. The careful application of indispensable engineering advice means heightened efficiency, prolonged life and the abolishing of excessive maintenance costs.

Overcoming Packing Troubles

A difficulty in a packing job is the establishment of a circulation through the packing to keep friction at a minimum and at the same time permit a seepage that will moderate cutting and maintain a temperature of a safe level. It is then apparent that a packing must possess inherent characteristics to endure under the conditions under which it is to operate, and that it must be installed or assembled to insure a long life with minimum friction and wear on the parts. If carelessness or indifference is exercised in either of these two requisites, packing difficulties soon become apparent.

Premature packing failures, not relevant to these conditions, receive their greatest impetus from mechanical defects. Unfortunately, packing does not possess the properties of instantaneous contraction or expansion, but has only a comparatively low re-



Impeller shaft showing the effects of poor lubrication, or sand and grit, or both. Although all cutting cannot possibly be eliminated, the detrimental effects of sand and grit can be retarded by careful attention to lubrication and to the proper setting of packing. In the case of the shaft shown, it was no longer possible to pack off the water even with new material.

silient quality. Therefore, it is physically impossible for a packing to form a seal where the deviation from the normal in rods or shafts is too great. The correction in such cases lies wholly in the adjustment or replacing of the misaligned or defective parts. If the seepage from the packing becomes alarming do not, at once, lay the fault upon the packing. The best of packing can not be effective under too adverse conditions.

The mechanical defects that augment packing failures are: misaligned or bent shafts, deeply scored rods or shafts, vibration of rotating elements, unbalanced or loose impellers, worn sleeves and ill conditioned bearings.

A packing will in most cases, where a rod has a comparatively large deviation in diameter, contrive to assume the greater diameter and excessive leakage will be the results. Some packings react more favorably under such conditions than do others. This type, of course, should be used. It may delay for a time the costly process of refinishing or replacement of the defective rod. It is not possible for a packing to be truly effective with scored rods.

The misalignment of a shaft will induce the packing to wear through the sleeve and score or reduce the diameter of the shaft. Badly worn bearings, which allow the shaft to drop below its normal center, makes packing a most difficult problem.

The efforts to effect a seal in association with mechanical imperfections that are adverse to normal packing conditions, are mostly wasted ones. It appears, definitely, that the best policy is the correction of the forces that tend to destroy the packing. Not only is the packing ineffective to a relatively high degree, but numerous and costly repacking work is required and losses in production are sustained. Such expenditures will, in the end, outstrip replacement costs.

In water pumps a small leakage around the packing should be permitted to eliminate excessive friction. By far, the best results are obtained from such a procedure. The glands must never be drawn tight and frequent adjustment is unfavorable. Glands taken up too tightly ruin the packing and cause scoring.

The action of water on packing causes some swelling or expansion. An allowance must be made for this expansion in repacking, even though it results in excess leakage until the packing is properly seated by operation.

Packing should be replaced before it becomes necessary to pull up tight on the glands to prevent leakage. At this stage the packing has become hardened and no longer is adequately lubricated. Under continued use the packing will score the shaft. It must be remembered, that when drawing up on the glands the rotative elements should be at rest; otherwise, the packing may be destroyed.

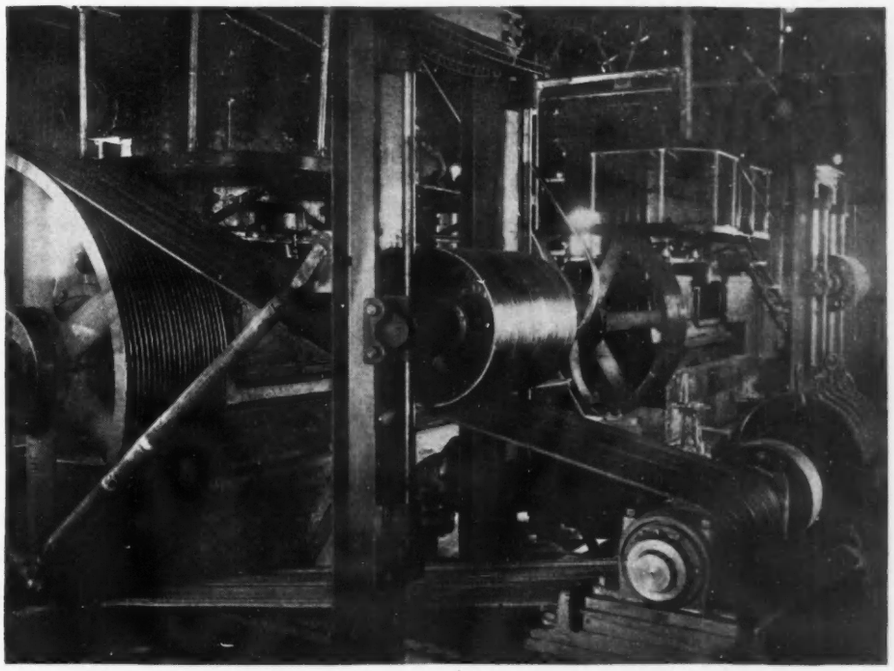
In centrifugal pumps, one of the first principles in packing is good lubrication. If water is used with a hard packing it must be entirely free of grit or sand or the sleeves will be scored. If soft or loosely fabricated packing is used, this danger is overcome to a very great extent.

Cylinder Wear Causes

Abrasion, high speed, excessive load, high temperature and low oil supply have been considered the cause of excessive cylinder wear. In cold starting, abrasion can easily be in the fore in cylinder wear, when the cooling system has become clogged or is not uniform. The results will be a distortion of the cylinder walls and abrasion can, of course, take place. The wear from this source becomes negative when the temperature has increased.

The reasons formerly held for excessive cylinder wear have receded to the background in the face of the fact that cylinder wear reaches its maximum during the starting period, due largely to the effects of corrosion by the products of combustion and the condensation of water on the walls. The wear is greatly

MEDART Uses the Oil Fields' Most Popular Bearing



Medart Belt Idler as used in the oil fields, including adjustable base plate with Timken-equipped pillow blocks and Timken-equipped idler pulley.

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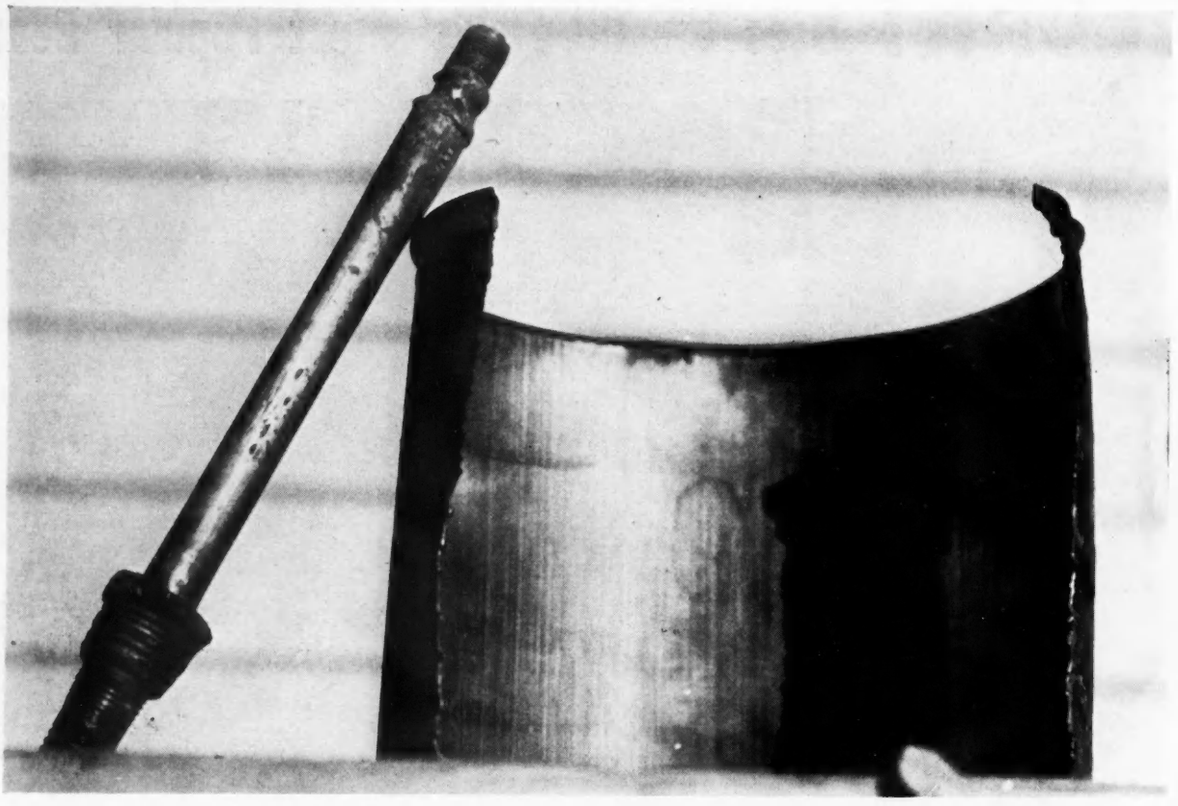
TIMKEN

TAPERED ROLLER BEARINGS



The pictured water pump cylinder lining, although showing the effects of service, has been replaced before its condition has reached the point of endangering the unit as a whole. At the left of the lining is a shaft showing the marks of a hammer, partially smoothed by operation. Badly cut threads on the follower indicate laxity in correct stabbing and attempts to tighten by wrench in spite of the fact that the part was evidently cross-threaded.

augmented under this condition of low temperature, when the oil supply is low. In view of this, unnecessary startings that have their origin in improper operation is a major reason for excessive cylinder wear.

Prolonging Bearing Life

The failure of bearings may be due to several different conditions. Lack of oil causes the seizing or welding of the metals in contact. The non-resistance of bearings to fatigue is another reason for the failure of bearings. This failure occurs under conditions of high temperature, high load, and high speed. Fatigue failure is what the name implies, a failure due to stresses imposed upon the bearings that exceed the strength of the material; fluid-film failure or corrosion play no part in it. The corrosion of certain bearing materials is affected at high temperatures. Such a condition is favorable to the oxidation of oil which results in the formation of acids that attack the bearings.

There is no danger of a bearing scoring when a true fluid-film is present between the metal surfaces. This condition exists with clean, pure, fresh oils. But, when the film fails the possibilities of scoring becomes imminent, as there is nothing to prevent the contact of the metals. It is evident that the oil used must form some sort of a film for the protection of the bearings. Not all oils have this property under use.

The anti-friction type of bearing has replaced the plain or babbit bearing in many pumps. It is of the utmost importance to keep the housing free of dirt, dust and other foreign and abrasive matter or the bearing will be worn and pitted by the abrasive action of this material. Carelessness in this matter is, no doubt the largest single factor contributing to the premature failure of this type of bearing.

Load and speed has a definite relation to the life of a bearing. If the magnitude of a load exceeds the strength of the bearing material, fatigue of the material will take place and the bearing will be ruined. Here again, the misapplication of a pump, in which the physical limitations have been surpassed, is the direct cause of failure. Never use a greater horsepower than that for which the unit was designed.

Care must be exercised in the installation of a bearing. If a bearing is mounted out of line, not only will the bearing be ruined but the shaft is subjected to a stress that may either produce a score or a badly bent shaft. In field replacements, when standard parts are not available, a bearing can be run from a ladel. Good quality bearing metal should be used, and the seating of the shaft should be checked by "blueing" and scraping. Field made bearings will wear in through the first extended period of operation so the initial fit may be slightly closer than the more accurate manufactured product.

As proper lubrication is essential to the satisfactory performance of a pump, the quality of lubricants used plays an important role in the life of the parts, making selection a matter of more than passing importance. Lubricants should be stable under all operating conditions and resistant to oxidation at high operating temperatures. At the same time it should be within a viscosity range that will produce a film under any operating conditions. It is well to follow recommendations as set

No two ways about it... these *Three* devices will STRAIGHTEN OUT those CROOKED HOLES

LESS EXPENSIVE
MORE ACCURATE
SPERRY-SUN'S
CORE ORIENTATION
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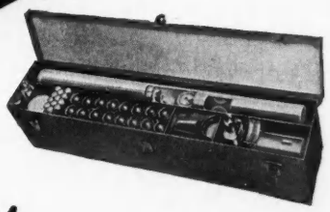
One Self Checking H-K (HEWITT KUSTER) Clinograph

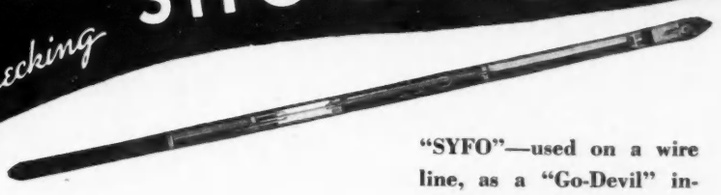


"H-K" designed for open holes only — provides permanent accurate, photographic records of inclination and direction on paper discs five minutes after removing instruments from hole. (U. S. Patents 1,812,994; 2,027,642 and others pending.)

Two Self Checking SURWEL GYROSCOPIC CLINOGRAPH

"SURWEL" provides a map of the well at all depths, prepared from actual photographic records, made while going in and coming out. (U. S. Patents 1,124,068; 1,812,994; 1,898,473; 1,959,141; 1,960,038; 2,006,556; 2,012,138; 2,012,152; 2,012,455; 2,012,456 and others pending.)

Three Self Checking SYFO Clinograph



"SYFO"—used on a wire line, as a "Go-Devil" inside the drill stem, or on sand or bailing line in open hole—affords quick, inexpensive daily records of vertical deviation in drilling, without the use of dangerous acids. (U. S. Patents 1,962,634; 2,013,875 and others pending.)

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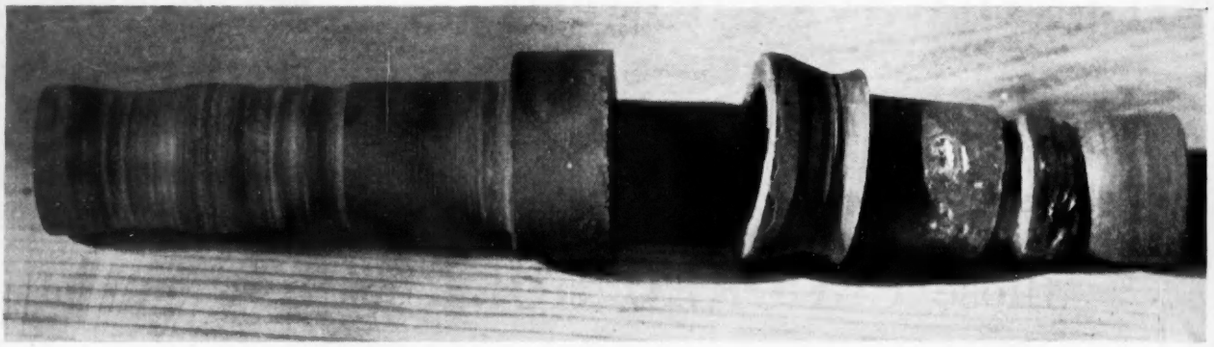
THE SPERRY-SUN WELL SURVEYING COMPANY has established and now has ready for service a laboratory for the purpose of determining the orientation of cores.

The value of knowledge of the direction of dip is evident to any experienced operator or geologist, not only in the case of wildcat wells and core holes to determine structure, but in proven areas to determine when wells have passed through faults or crossed the axes of asymmetrical anticlines into areas from which they should be deflected.

The method employed is original and entirely different from those previously used. The superiority of Sperry-Sun's Polar Core Orientation (U. S. Patents 1,792,639, 1,778,981 and others pending) lies, not only in its accuracy but also in the fact that it does not interfere with the progress of drilling. The orientation is determined in a laboratory, to which selected cores, taken by any type core barrels in the ordinary course of drilling and properly marked, are shipped from any distance. No special equipment is required at the well; there is no loss of drilling time. The resulting saving in time when translated into dollars shows a substantial saving over former methods.



Water pump packing sleeves showing abnormal wear; possibly due to lack of sufficient lubrication, as indicated by coloration of surface. Although in themselves a minor expense, their replacement becomes a major part of the cost of pump operation.

forth by pump manufacturers unless some special consideration is necessary to meet unusual requirements. The habit of using "any old oil" in water pumps is distinctly out of date. Pumps are better made, more closely fitted, and require equally better lubrication.

Preventing Water Corrosion

Chemicals that may be present in water either through chance or by intention place a definite demand upon fittings. Water of a high alkaline or ammonia content requires iron fittings. In neutral waters, bronze fittings are commonly used, as well as in acid waters. A misapplication of alloys will result in excessive corrosion.

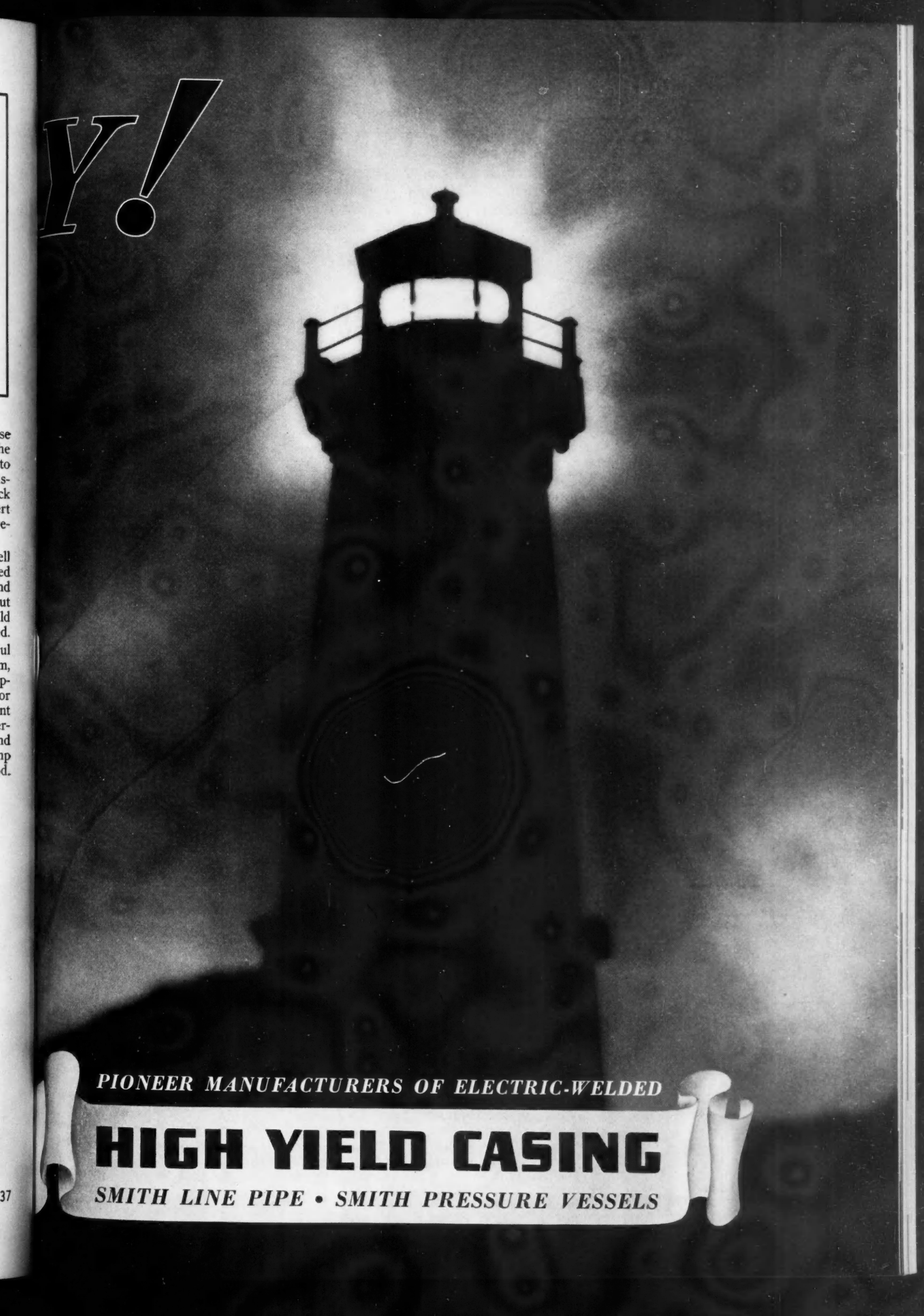
Strainers are a safe guard against the lodging of foreign matter in impellers of rotary equipment. Obstructions in pump impellers not only cut the discharge throw, but unbalance the rotating parts with the probability of more serious trouble resulting. The strainer used should have a net opening area equal to four times the area of the suction side of the pump. It must be kept free of debris, otherwise the pump suction, and consequently the discharge, will be reduced.

A loss in efficiency is incurred where there is an appreciable wear between the impeller and the case rings. This allows a flow of water, or slippage, from the discharge back to the suction and the pump is made to handle a percent of the water twice before it is discharged. Full capacity may frequently be brought back to normal by filing back the impeller vanes. An expert mechanic can accomplish this and the expense of replacement is often averted.

Flow conditions in centrifugal pumps demand well conditioned and well shaped impellers. Deeply pitted and eroded blades, blades undermined by corrosion and blades that are misshapened, greatly reduce the output of the pump. Under such conditions the pump should be dismantled and the cause of the trouble eliminated.

The keynote of the life of any pump is the careful application of an intelligent maintenance program, backed by constant attention during the periods of operation. No unit, no matter how well constructed or logically adapted to requirements, can be fully efficient or satisfactory if carelessness or indifference is exercised in operation or maintenance. By looking for and preventing the conditions discussed here, water pump life may be economically extended over a lengthy period.

Reprints of the foregoing article and of the one commencing on the following page are available in combined form at nominal cost. Write The Gulf Publishing Company, Houston, Texas.


Y!
PIONEER MANUFACTURERS OF ELECTRIC-WELDED
HIGH YIELD CASING
SMITH LINE PIPE • SMITH PRESSURE VESSELS

If you have ever struggled to resurface a deeply hidden water pump suction valve seat with a bit of emery paper, and at the same time retain a modicum of epidermis on the fingers, you will recognize the boon such a device as the one described can be.

Drill Motor Speeds Valve Seating

By ELTON STERRETT, Engineer

RECONDITIONING of flat valves for the fluid end of pumps handling cooling water—in East Texas often corrosive and frequently carrying appreciable quantities of fine grained but abrasive sands—is a chore which comes all too frequently to the pipe line station not equipped with the proper auxiliaries or the urge to bend existing aids to the work in hand.

Metal Is Saved

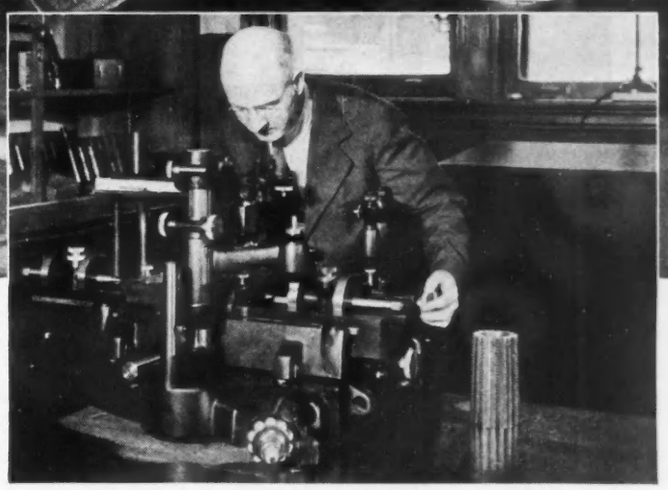
Usual procedure is to pull the valves and reface them, hoping that the seats on suction and discharge decks of the pumps have not been damaged enough to cut down the efficiency of the valves appreciably. Where the seat is so bad as to be insistent on resurfacing, the upper or discharge deck can sometimes be brought to line with a flat or mill file—if the seats have been screwed into the casting so that they do not interfere with the stroke of the file across adjacent seats. This truing by file is slow, and usually results in much more metal being removed from the seat than would be required simply to bring the two concentric rings of valve bearing into one plane so that the worked-over valve will seal properly.

When the discharge deck is resurfaced with a file, there still remains the problem of working over the suction valves, nested deep within the pump body, and yielding only to grinding with the valve as holder for the abrasive, or slow and painful working down with a small piece of emery cloth.

Confronted with the task of refinishing the valves in the pumps furnishing cooling water for its internal combustion engines, and with the valve seats so firmly imbedded in the pump casting as to endanger them if pulling was attempted, an attempt was made to press into service the station's electric drill and do the job by power.

Use Discarded Parts

A grinding head—if the device may be so designated—was formed from two discarded piston follower heads from the same pumps as being reconditioned, it being found that these would adequately



Where Quality is Known in Advance

There are many reasons why Youngstown casing, tubing, drill pipe, line pipe are always uniformly satisfactory. But one of the most important is this—Youngstown tube mills, from furnaces to final inspection, are under one roof.

If a heat of steel turns out even a shade above or below the tolerances our inspectors demand for oil country goods, the executive division to which they are solely responsible will not permit them to pass it. If our operations were not concentrated as they are, we *might* be more lenient in inspection.

But with our compact operations, we don't have that temptation. Every heat of steel used in oil country goods *exactly* meets oil country specifications. The result is tubular goods that are easier for you to work with, and that assure longer life and better results.

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YOUNGSTOWN

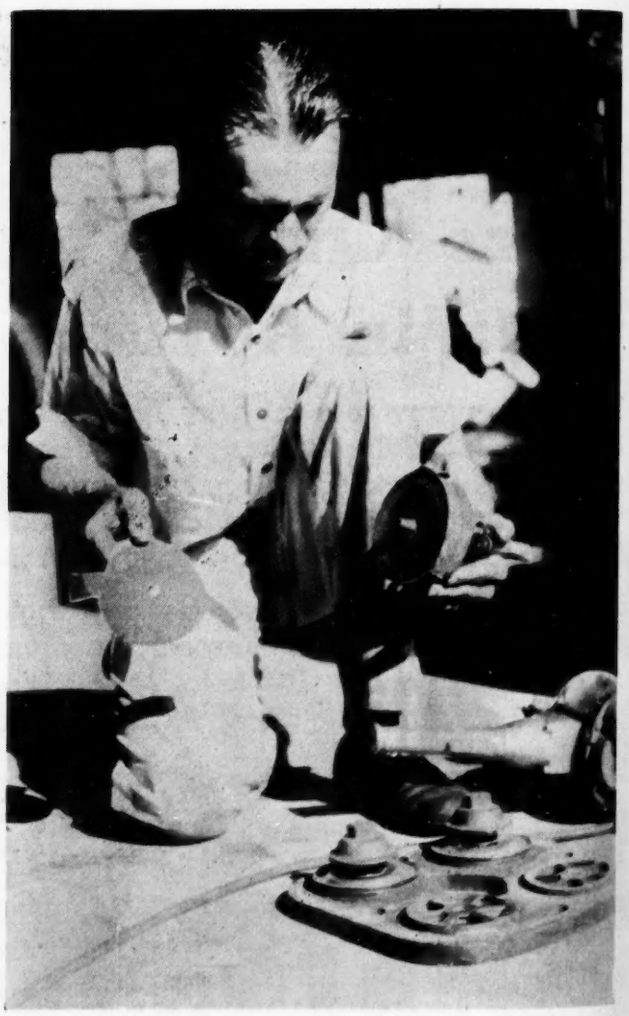
Power truing of flat valve seats with improvised grinder held flexibly against seat with springs to avoid cramping or warping of valve plane.

cover the valve seats and still go into the deep recess holding the suction valves. Reamed out to fit a spindle improvised from an old twist drill stub, the two follower heads were drilled, the upper to allow a half-inch bolt to pass through the two holes, the lower tapped to take the threads from these same two bolts. The original pump rod hole through the upper head was filed to fit a hexagon nut welded to the spindle, to provide a drive to the grinder. The lower end of the spindle was ground down to enter the threads in the center of the valve seat spider and act as pilot for the grinding operation.

The abrasive used was No. 0 emery cloth, cut in the shape of a disk the size of the follower heads, but with four ears or lugs left around its periphery, long enough to fold around the lower grinder section and be clamped between it and the upper plate when the two half-inch bolts were tightened.

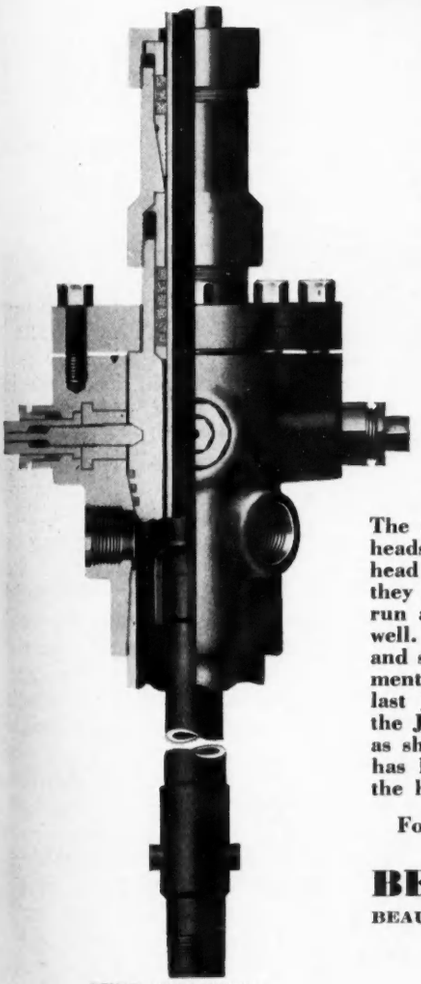
As it was impossible to hold the motor exactly vertical over the center of the valve seat being ground, the fit between spindle and improvised grinding head was made free enough so the clamping plates could "float" slightly around the spindle, yet be positively driven through the medium of the hex and nut. To provide the proper pressure between grinder head and valve seat, two discarded valve springs were used, threaded on the spindle before being chucked in the drill. Even when deliberately held quite noticeably off vertical, when the spring was used the grinding surface was found to revolve in the plane of the valve seat, and to bring the corroded or eroded seat back to a plane surface rapidly and so accurately that a mere touch-up grind with a fine grade of abrasive on the valve was sufficient to insure the desired pressure seal.

Where the overhaul of valves on a circulating pump had previously been considered a day's work; with the drill motor and the grinding head described, a full set of valves, four suction and four discharge, was trued up and ready for service within an hour after the pump was withdrawn from circulatnig service. This time could have been halved had there been another man available for resurfacing the valves, while one engineer ran the drill motor and overhauled the seats.



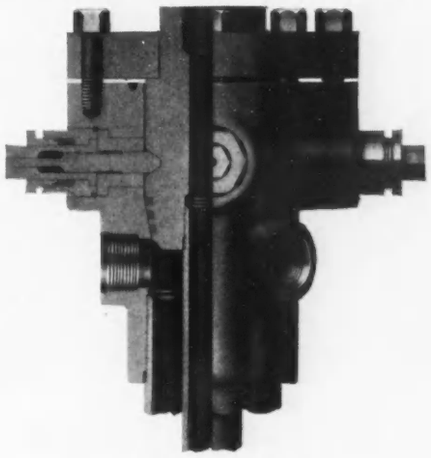
The formed sheets of emery cloth are quickly and easily changed simply by loosening the two clamping bolts, removing worn disk and tightening new one.

DREADNAUGHT *Pressure type* TUBING HEADS



TYPE "HX-1075"

- Permit completion of high pressure wells without killing them with heavy mud.
- Type "HX-1075" permits setting packer and landing tubing simultaneously.
- Facilitate re-working well under pressure without killing it.
- T-segment bolts lock tubing hanger in place and permit removal of ALL blowout preventer equipment.
- 6,000-lb. test pressure . . . alloy steel.



TYPE "HX-1070"

The accompanying sectional drawings clearly illustrate the mechanism of these heads. The T-segment bolt principle of locking the hanger in the body of the head is the same in both types, i.e., the T-segment bolts are backed out until they seal off on a bronze seat recessed in the thrust bolts while tubing is being run and landed, and are then screwed into a slot in the hanger to seal in the well. In the type "HX-1070", the last joint of tubing is cut to desired length and screwed into the hanger, which passes through the blowout preventer equipment. In the type "HX-1075", the entire hanger assembly is made up on the last joint of tubing, landed through blowout preventer equipment, and after the J-tool has been released to set packer the tubing string is supported by slips as shown in the accompanying illustration. After blowout preventer equipment has been stripped off, a split lap-joint ring bolts down over a lip on top of the hanger.

For complete specifications, write for a copy of Bulletin N-1.

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DREADNAUGHT

Methods of Operating High Pressure Gas Wells

By F. D. FRANK
Cities Service Gas Company

The purpose of this paper is to give a brief description of the difficulties encountered in taking gas from high-pressure gas wells by Cities Service Gas Company, and the methods that were adopted to overcome these troubles. It was presented before the Southwestern Gas Measurement Short Course, held at the University of Oklahoma, April 20-22, 1937, and was delivered there by Lane Fergeson of Cities Service Gas Company.

SINCE the era of higher rock pressures, the regulation of deliveries when taking small quantities of gas and the resultant freezing has constantly been a problem which the gas man has had to overcome; however, his ingenuity has served him well, as small quantities of gas can now be taken from wells with a rock pressure as high as 2500 pounds.

The difficulties encountered in taking a small percentage of the open flow of high-pressure gas wells may be classified in four different groups; namely,

1. Regulation of deliveries
2. Elimination of freezing
3. Removal of fluid
4. Measurement.

This company has successfully overcome these difficulties by the installation of a cutting device to regulate the deliveries and reduce pressures, a hot water heater to eliminate freezing, separator connections and drips to remove the fluid, and an orifice meter to secure measurement.

The usual practice is to make these installations at some distance from the well, preferably along a road, so that they are easily accessible by car. The well line then must be constructed of pipe of sufficient weight to withstand the rock pressure of the well. On wells with ordinary rock pressures, standard weight pipe is used; however, on wells with exceedingly high rock pressures upset tubing, still tubes, or extra heavy seamless pipe is used. When upset tubing is used the tubing is screwed together and the joints reinforced by electrically welding the collars. No trouble has been experienced with these types of well lines.

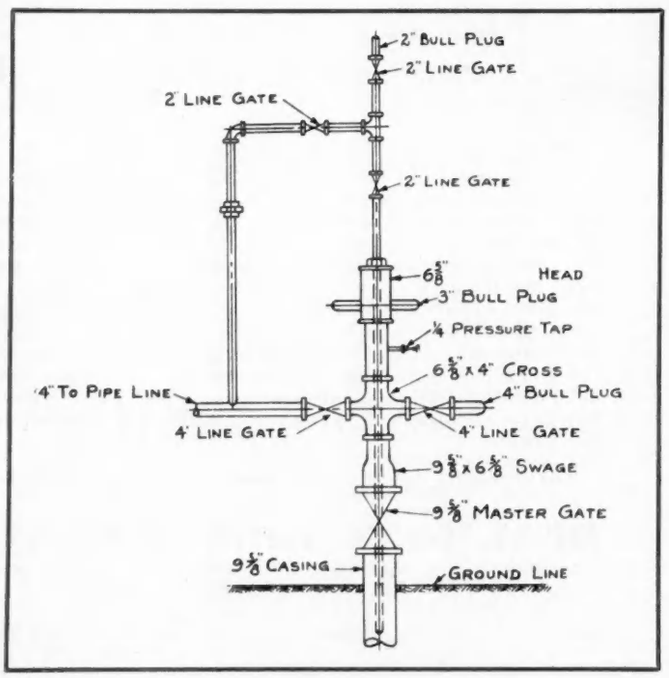


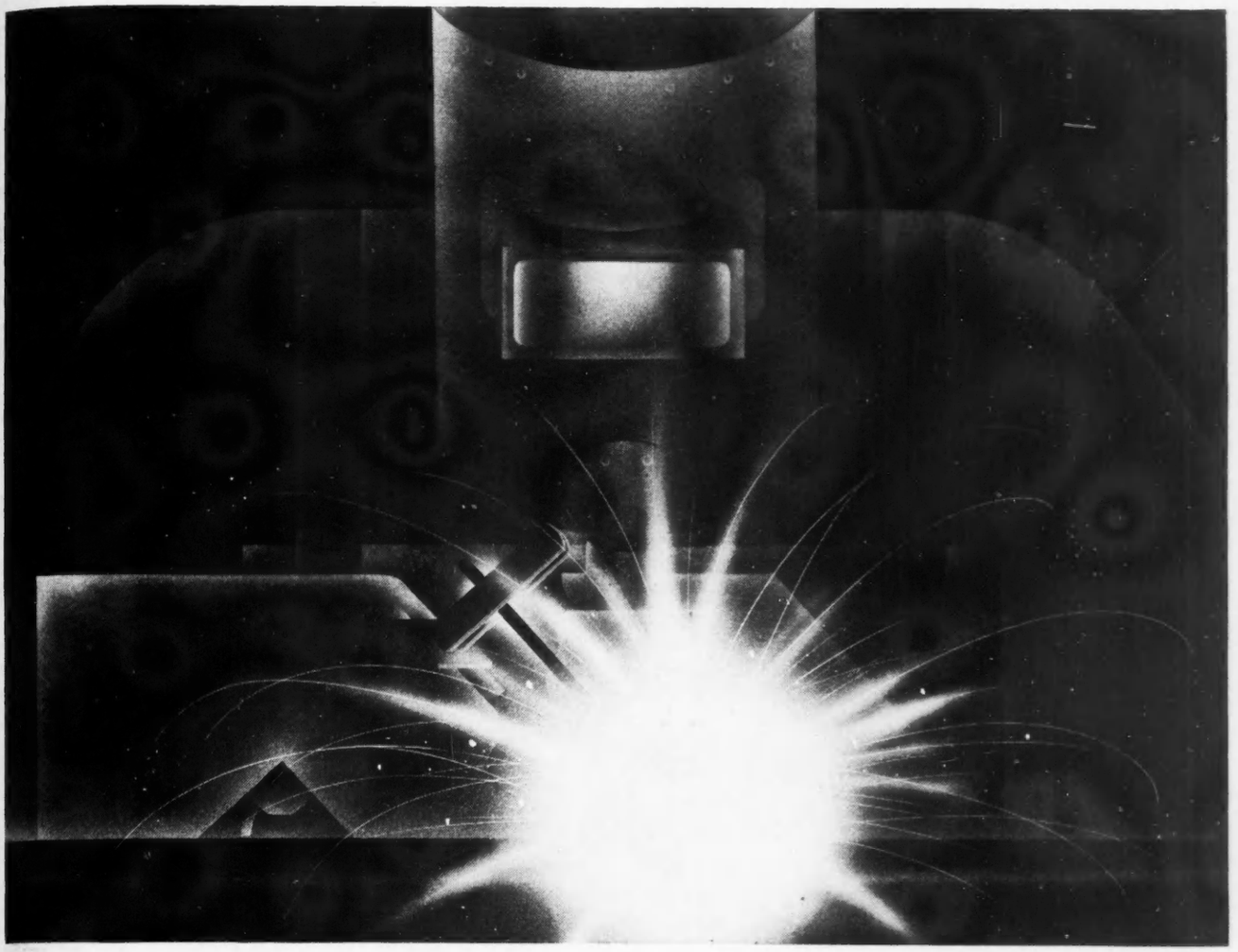
FIGURE 1
Ideal Well Hook-Up

Well Hook Up

In Figure 1 is shown the usual manner in which the well line is connected to a high-pressure gas well. This hook-up is ideal from the standpoint of both the producer and the buyer. The well can be produced through either the tubing or casing or both. In the event the well is wet, the fluid can be produced through the tubing along with the gas, where otherwise it might not be possible to produce enough gas to lift the fluid through the casing.

In taking gas from high-pressure combination oil and gas wells the most common practice is to connect the well line to the vent line on the outlet of the separator. The pressure on the well line then is governed by the ability of the well to produce oil against pressure.

The first device used to regulate deliveries and cut pressure was known as the "Christmas Tree Cutting Device," a sketch of which is shown in Figure 2. It consisted of a block gate with two or more by-passes of smaller sizes, the size of



For new requirements . . . MOLY steels

WITH the decided trend toward higher steam pressures and temperatures, there is also a growing tendency toward welded pipe-line assemblies.

Carbon-Molybdenum steel is being used more and more extensively in steam-line construction because it meets the stricter present-day requirements: It has good creep strength and retains its strength at elevated temperatures. It lends itself to welded construction. And — its cost is so low, in comparison with its advantages, that in the end it is really the most economical steel for the purpose. In a weldability investigation, tests showed:

At room temperature Carbon-Molybdenum steel was 10% higher in tensile strength and 20% higher in yield point than Carbon steel;

At 950° F. the drop in these qualities respectively was 14% and 15% for Carbon-Molybdenum and 31% and 34% for Carbon;

At 1050° F. the drop in both qualities was 24% for Carbon-Molybdenum and 50% for Carbon.

Our technical book, "Molybdenum," will prove useful to engineers and production heads interested in cost cutting and product improvement. Our monthly news-sheet, "The Moly Matrix," keeps readers informed on Moly developments. Both sent free on request. Our laboratory is available for the study of special ferrous problems. Climax Molybdenum Co., 500 Fifth Ave., New York.

PRODUCERS OF FERRO-MOLYBDENUM, CALCIUM MOLYBDATE AND MOLYBDENUM TRIOXIDE

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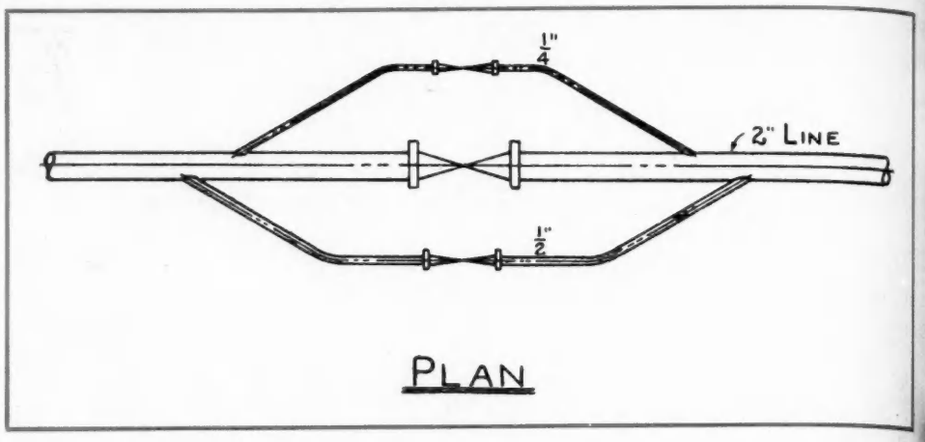


FIGURE 2
Christmas Tree Cutting Device

which was dependent upon the capacity of the well to be connected. Another cutting device of similar design was sometimes used. It consisted of two headers connected together with three pieces of 2-inch pipe in which was placed a thin plate orifice to regulate the deliveries and cut pressures. After the invention of the flow-beam, these devices were discarded in favor of the flow-bean.

This device consisted of a choke nipple with a cone-shaped seat machined into each end. A needle point valve attached directly to the stem is ground to fit into the cone-shaped seat to give a positive shut-off when closed. When the seat becomes scoured so that a positive shut-off cannot be obtained, a new seat can be obtained by simply inverting the choke nipple. The flow-bean is equipped with a scale so that the position of the needle point may be ascertained by noting the reading on the scale, which is a great deal of help in regulating the deliveries from the well. The flow-bean has proven very satisfactory with the exception of a few cases, where large volumes of gas were being taken from wells with high rock pressures. In these cases, vibrations were so great that breakage of the needle point, stem, or yoke was experienced, and it was necessary to discard the flow-bean in favor of the thin plate orifice method.

Elimination of Freezing

The hot water heater is installed just ahead of the flow-beam as shown in Figure 3 and is constructed of such length as to allow the gas to be heated to sufficient temperature to prevent freezing after the pressure is cut at the flow-bean. Usually a heater of 16 to 20 feet in length is sufficient; however, in a few cases it has been necessary to make them 40 feet long and install an extra burner in order to bring the gas to a high enough temperature to prevent freezing. The heater consists of a 4-inch pipe through which the gas passes, a water jacket made of 8-inch pipe on the outside of the 4-inch pipe, and a fire box made of 12-inch pipe placed around the 8-inch pipe, a burner, a vent pipe, and a filling funnel connected to the water jacket. A detailed sketch of heater and burner is shown in Figure 4. This type of heater has proven very satisfactory and requires little attention.

Removal of Fluid

A certain amount of fluid is condensed out when the gas pressure is reduced at the flow-bean. A horizontal drip is placed just ahead of the meter to catch any fluid that might be carried along with the gas so that it will not interfere with the measurement or pass through the meter into the main line. The drip will usually handle all of the fluid from a comparatively dry gas well; however, some wells produce so much fluid that the drip will not remove it. In such cases, it is necessary to pass the gas through a separator. This possibility is provided for in every well

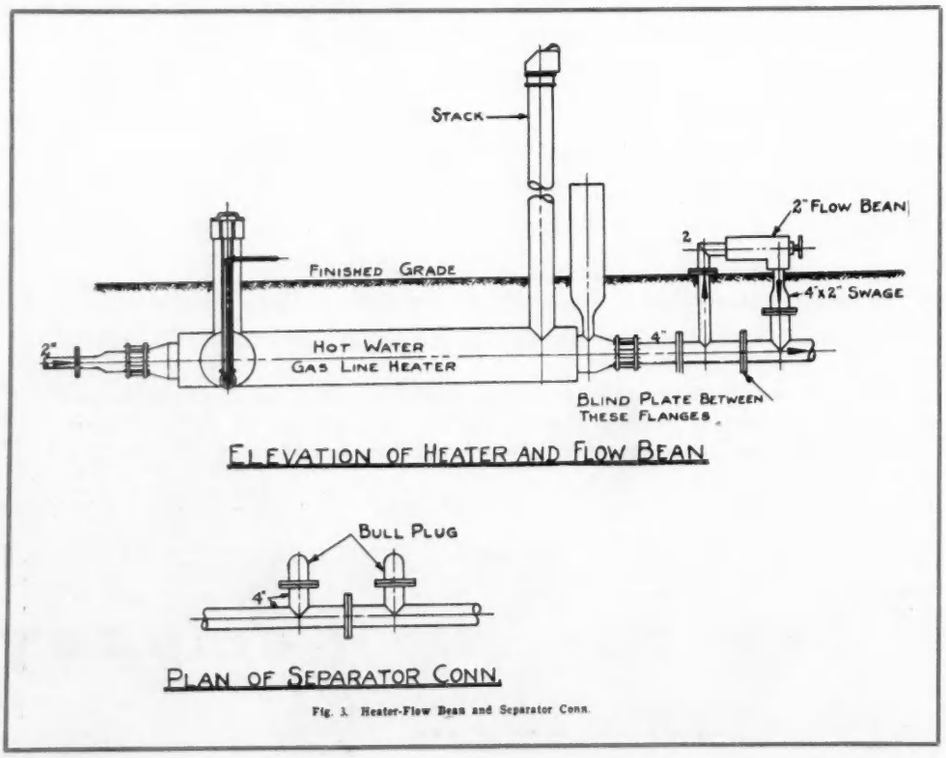


Fig. 3. Heater-Flow Bean and Separator Conn.

New Louisiana Coastal Field Opened in Lafourche Parish

Fohs and Pilgrim Wildcat Flowing 36 Barrels Hourly

Stanolind Halts Work on Green's Bayou Oil Test.

A new Louisiana gulf coast oil field was opened Tuesday with the completion of Fohs Oil company and Pilgrim Exploration company's No. 1 State Land, in the Long Lake area, Lafourche parish.

The wildcat was washed into production early Tuesday and Tuesday afternoon was flowing an estimated 36 barrels of 38 gravity crude per hour through a quarter-inch choke.

Retained in the Miocene sand at 9368 feet, the operators set seven-inch casing at 9380 feet.

The well is still cleaning into pits with 60 per cent of the flow being oil. Tubing pressure was 800 pounds and casing pressure 1400 pounds.

Old Ocean Wildcat.

Abercrombie and Harrison's No. 4 [illegible] one of the deepest in the Texas gulf coast [illegible]

Crude Demand Next [illegible]

U. S. Puts New Teeth in Rules [illegible]

I.P.A.A. Committee Mem[illegible] Named

'Absentee' Slaying [illegible]

. . . AND A CAMERON TYPE "C" CORE BARREL SHOWED THEM THE SAND!

Approach to Long Lake No. 1 is by water, as shown by the photograph above. All material is barged in to location.

BELOW: Day crew on Long Lake No. 1. From left to right they are: C. R. King, driller; C. H. Aycock, derrick man; Will Watson, helper; F. L. Zeolla, helper; W. G. Isaacks, general superintendent; T. M. Pellegrin, helper.

TO LEFT: Cross section illustration of the famous Cameron Type "C" Rotary Core Barrel which, when properly maintained in accordance with manufacturer's instructions, may be relied upon for exceptionally high percentage of core recovery.

Fohs Oil Company Long Lake No. 1, Long Lake Lafourche Parish, Louisiana, on June 22nd, 1937, opened a new Louisiana Gulf Coast oil field. This well was cored with a wire line core barrel down to 9368 feet. But, when a change of formation warned that a deep oil sand might be in prospect, a Cameron 4" Type "C" Core Barrel was used between 9368-9406 feet. Of the 38 feet cored with the Cameron Barrel, 33 feet of core was recovered—or 87%. W. B. Isaacks, general superintendent for the Fohs Oil Company, says of the Cameron Core Barrel, "It is the best rotary barrel I ever used. We used a wire line core barrel until we got a formation break which indicated sand possibilities. We then ran the Cameron Type 'C' Core Barrel. It gave us very high percentage of recovery in the soft formations, and very excellent recovery in the hard formations. We used the Cameron Barrel exclusively in coring 26 wells in the English Bayou field, Louisiana, ranging from 7000 to 7100 feet in depth. Our average recovery was never less than 85%."

When properly maintained according to manufacturer's instructions, and when factory redressed core heads are used, 100% core recovery in soft formations may be expected with astonishing regularity. Equally excellent recovery may be anticipated in hard formations when the special Cameron hard formation adapter, permitting the use of a roller type cutter head, is used.

Full details concerning design, construction and operation of Cameron Type "C" Core Barrel will gladly be provided to any interested operator on request.

CAMERON IRON WORKS, INC.

711 MILBY STREET, HOUSTON, TEXAS

EXPORT OFFICE: 74 Trinity Place, New York, N. Y.
MIDLAND: W. P. (Red) Knight
CORPUS CHRISTI: J. M. (Red) Teague
LOUISIANA: Pelican Well Tool & Supply Company
OKLAHOMA and KANSAS: Carson Machine & Supply Co.
MEXICO: J. W. Allen, Apdo. 542, Tampico, Tamps.

hook-up through the installation of "separator connections." It consists of an orifice meter flange placed in the line on the downstream side of the flow-bean. A 4-inch tap, blinded with a bull plug, is made on either side of the orifice meter flange. In the event the well makes too much fluid, it is only necessary to place a blind disc in the orifice meter flange and connect the separator to the 4-inch taps.

Measurement

The gas is measured through a standard orifice meter setting with a 2-inch by-pass. In most cases, a check valve is placed on the well side near the main line tap gate to prevent draining of the main line in the event the well line broke. A sketch of these installations is shown in Figure 5.

The metering equipment is housed in a small corrugated iron building. The meter house is heated during the winter months with an upright gas heater which furnishes sufficient heat to prevent freezing in the meter connections.

It has been found that ice forming in these connections often is the cause of erroneous measurement but can be prevented by keeping the temperature in the meter house well above freezing.

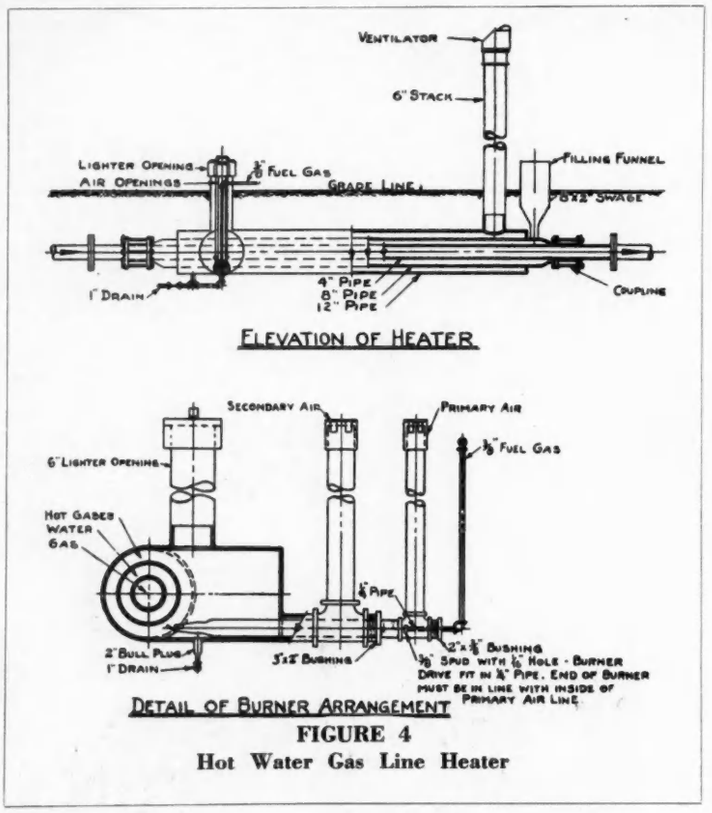


FIGURE 4
Hot Water Gas Line Heater

The meter house heater is set close to the back side of the meter. Primary and secondary air for combustion is piped in from the outside so that the heater itself is air-tight within the building. This construction was adopted in order to elminate fire hazards due to leaky connections within the building.

Fuel for the heater is obtained from a tap on the downstream side of the orifice meter flange on the by-pass. Such a connection helps one to secure dry gas for fuel. Some difficulty has been experienced in keeping the burner lighted when taking gas from the opposite side of the by-pass flange due to fluid.

The pressure on the fuel line is controlled by a 1-inch regulator equipped with a relief valve as a safety measure. The mushroom burner and the vent pipe as shown in the sketch has proven very effective in producing constant and even fire. This type of heater has been used for several years by this company and has always given good results.

The methods and installations described in this paper are the results of ideas of employes of this company and other companies obtained in years of experience in the production, measurement and transportation of gas.

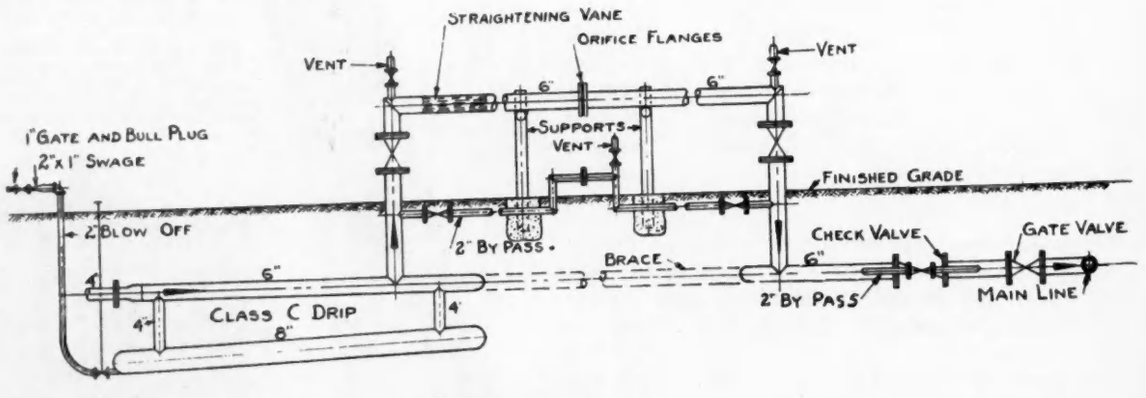
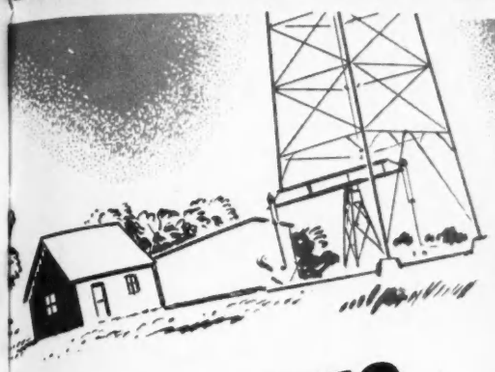


FIGURE 5
Standard Meter Run for Gas Wells

ROUGH RIDER RAW EDGE BELTING



OUTLASTS *in Oilfield* SERVICE

Eighteen months of service, *without a sign of wear*, is the record of this Rough Rider Raw Edge Belt in operation in Oklahoma City field, with many years of additional uninterrupted service still to go. And not an unusual record for Rough Rider Raw Edge Belt.

Quality materials, expert workmanship, oil field experience—combine to make this sturdy belt hard pulling and long-wearing. Results in the field prove its superiority.

High tensile strength...extreme flexibility...long life bonding material between the plies—all are vital factors in Rough Rider Raw Edge Belt. Universally accepted for the toughest jobs, both in and out of the oil industry, it has all these vital factors—and more.

Complete stocks of Rough Rider Raw Edge Belt are available at all Continental stores.

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Oklahoma City rig front installation, pumping from 6-200-ft. level, using 2½" tubing and ⅞" sucker rods

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CONTINENTAL

Improved Mud Circulating System Cuts Drilling Time

By BRAD MILLS, Associate Editor

USE OF an improved mud circulating system has enabled the Harry L. Edwards Drilling Company to reduce drilling time in the Dickinson, Texas, field. Application of the full-hole idea in the drill pipe string, use of larger openings in the surface mud equipment, elimination of unnecessary turns in the mud line, "easier" turns in the mud line between the pumps and the swivel, large capacity slush pumps, large inside diameter drilling hose, and larger holes in the bit have given an increased volume of mud with a reduced pressure. The arrangement has been the principal factor in reducing drilling time to a fraction of that required for the first group of completions in the field.

Tool Joints Showed the Way

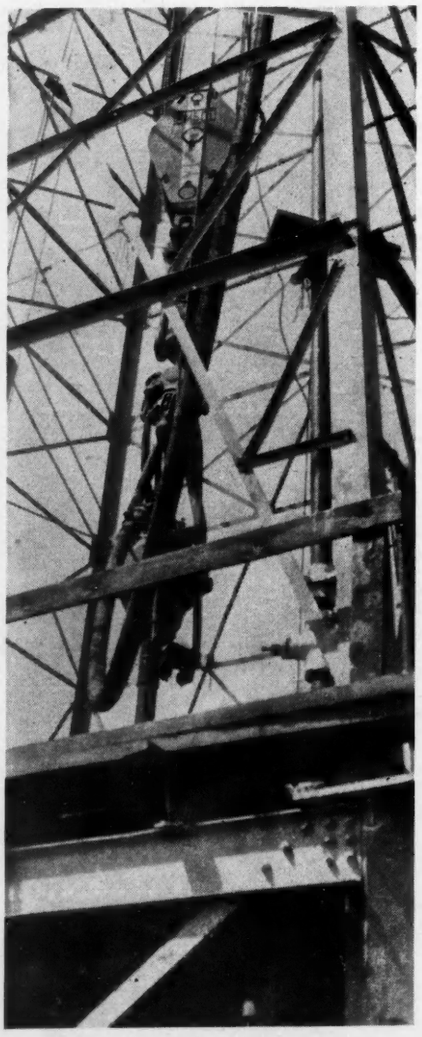
Developments in Dickinson have been a continuation of the application of extreme full-hole mud circulating systems that showed desirable results when first tried in several districts. The full-hole idea was first applied to tool joints only in a mild way, but the distinct benefits obtained from the use of larger openings indicated that advantages were possible through extending the principle to all items involved in the mud circulating system.

The soft and stable formations at Dickinson are particularly suited to rapid drilling, but the maximum speed can be attained only when the mud volume is large and all cuttings are brought to the surface. It was largely the need for an increased mud volume that prompted development of an improved circulating system.

Reduces Maintenance

The principal benefits derived from the application of an enlarged circulating system are: greatly reduced pump pressures and maintenance, higher pump efficiency, greater bit pressure with lowered pump pressures, increased volume in gallons per minute delivered at the bit, and reduced steam consumption. The arrangement generally reduces the drilling expense through the reduction in drilling time and decreased wear on certain equipment.

The sharp reduction in pump pressure has been a feature of operations with the full-hole principle. During the drilling of recent wells at Dickinson, the pump pressure with the enlarged circulating system has averaged about 250 pounds less than was shown some time ago with smaller surface connections and conventional tool joints. The lower pump pressures have been attained with an increased fluid volume and lower steam consumption. The lower pressure gives a greater personal safety and undoubtedly reduces tool joint washouts.



The drilling hose used at Dickinson is one of the largest high-pressure types manufactured.

When necessary, it has been possible to change the mud in the entire system in a much shorter time than in the restricted type of circulating system. The handling of heavy mud also has been simplified by the use of the full-hole circulating principle. The elimination of restrictions in the surface flow lines and equipment played an important part in the increased efficiency of the circulating system as a whole.

Balance Essential

Best results have been obtained by using as few turns as possible in the lines. It also has been found most effective to have the entire mud system in balance, with reference to the inside diameter of all items in the circulating system. The purpose of the large-opening idea might be defeated by the use of a single restriction that would throw the circulating system out of balance. A special effort has been made to eliminate restrictions in mud lines between the pumps and the kelly.

The early use of full-hole equipment below the surface was accompanied by use of surface flow equipment that retained the objectionable restrictions. The fluid volume was thus affected and reduced by that portion of the circulation system that should have been easiest to enlarge and correct. The latest installation in the Dickinson field carries an enlarged inside diameter for all mud lines, the standpipe, drilling hose, swivel and kelly.

The Latest Hook-Up

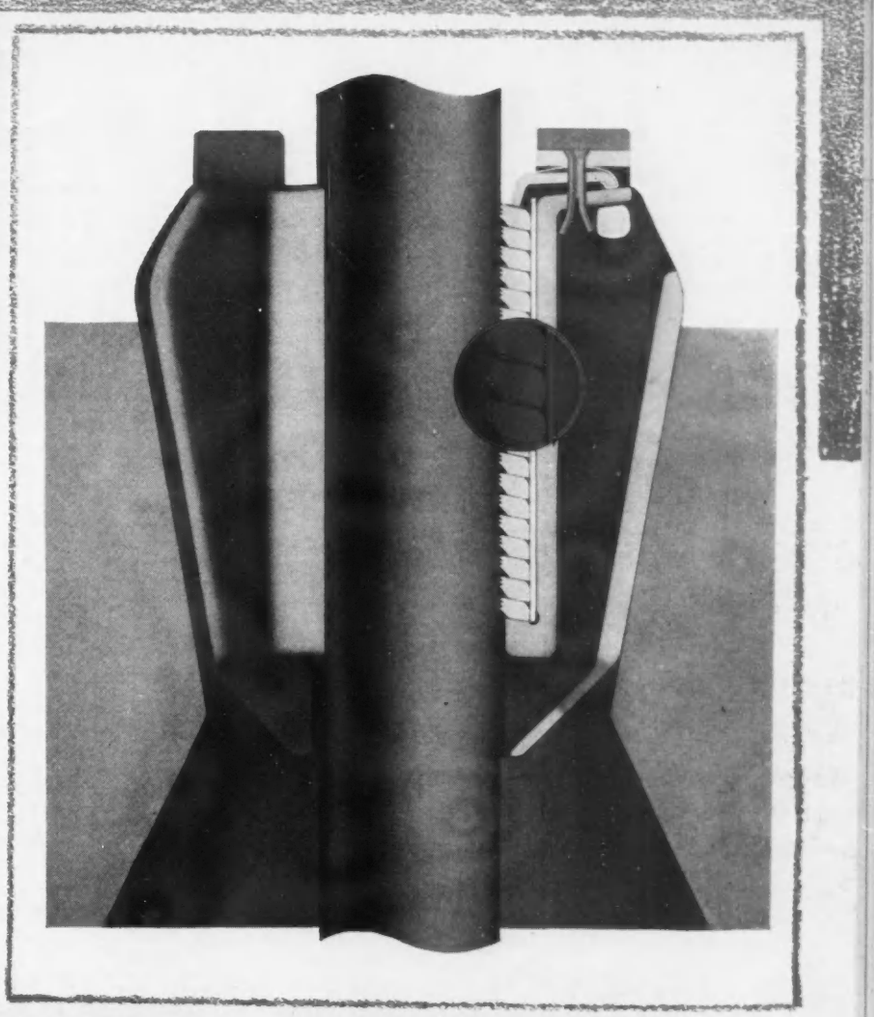
The latest hook-up at Dickinson includes two, 20-inch, heavy-duty slush pumps; 4½-inch outside diameter mud lines with 3¾-inch inside diameter; 4½-inch outside diameter

No sticking

IN THE BOWL

NO DAMAGE to PIPE

with



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ROLLING DOGS

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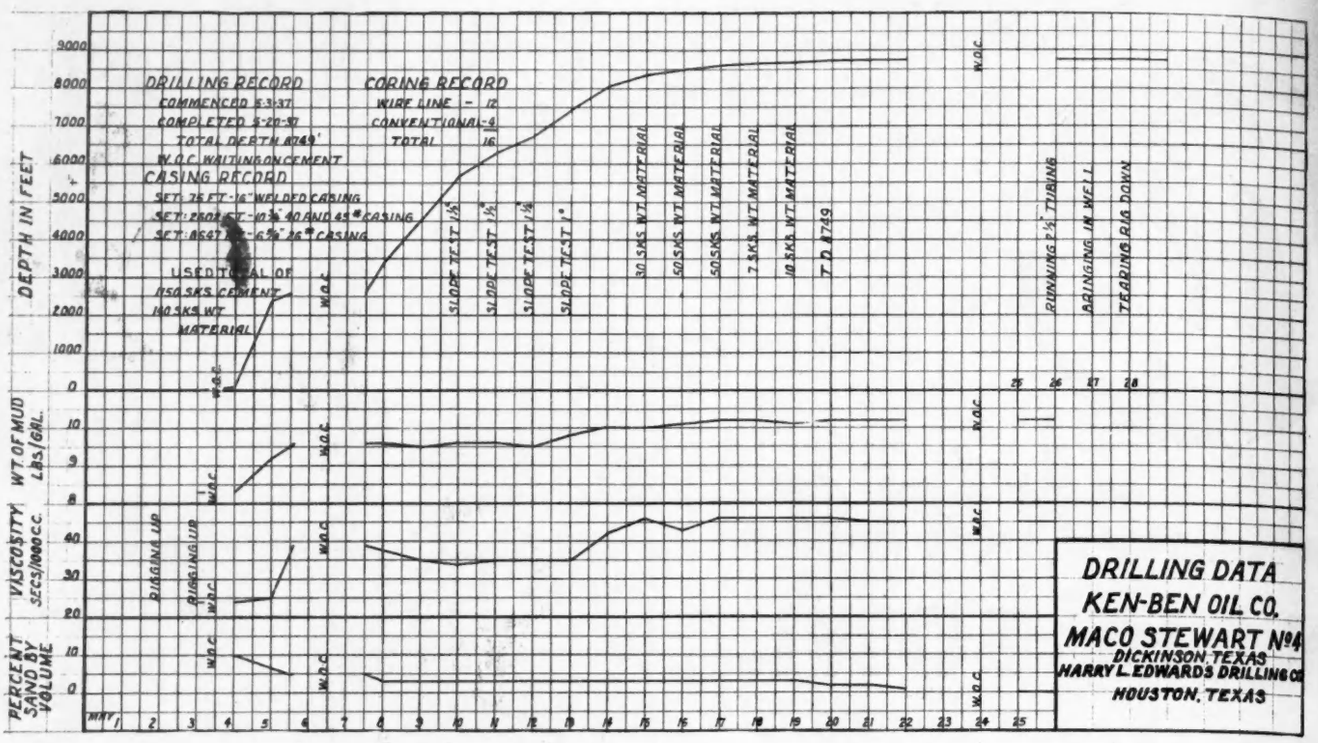

The drilling data for each completed well are imposed on a chart to show the percent of sand by volume, viscosity and weight of mud, drilling progress, and other details.

standpipe with 3¾-inch inside diameter; 3½-inch inside diameter upset rotary hose to take a 3½-inch nipple; swivel with 4-inch inside diameter wash pipe; 6-inch square kelly with 4-inch inside diameter hole; 4½-inch outside diameter, external upset, 3.690-inch inside diameter rotary drill pipe; and tool joints with 3 11/16-inch inside diameter. The inside diameter of the tool joints so nearly equals that of the drill pipe that they may be called the same. The slight variation is due to the weight of the 18.15-pound drill pipe, the extra weight on the inside giving the tool joints a slightly larger inside diameter of the drill pipe itself. The hook-up in use gives a full opening from the pumps to bit, with the exception of a slight restriction in the 3½-inch rotary hose and nipple. This passage is only 19/100-inch smaller than the inside diameter of the drill pipe. This 3½-inch rotary hose is the largest ever built for conventional drilling operations and was specially designed to give a larger fluid volume in connection with the use of full-hole equipment and new type bits.

Can Double Bit Openings

It is possible with this enlarged circulation system to use much larger holes in the drilling bit than can be used with a smaller inside diameter system. It is possible to double the area of the bit openings and still retain the jetting action of the mud that assists the bit to make hole under certain conditions. When using a 10-inch bit, two 1⅛-inch or four ⅞-inch openings are used to give full returns without loss of the jetting action.

With the use of this type of circulation system, it is possible to swab the drill pipe, bail, run a collapsible bit, or run inside cutting tools. It also is possible in emergencies to use this type of drill pipe and tool joints as casing when bringing in the well.

Greater Speed Making Hole

The soft formations near the surface at Dickinson may be drilled with great speed, the mud fluid playing an important part in the drilling rate. A driller with the Harry L. Edwards Drilling Company drilled 1732 feet of straight hole in an eight-hour tour, and more than 2300 feet of hole was made during the 24-hour period. The well was drilled from 76 feet to more than 8000 feet in 10 days, of which a two-day period was taken while waiting on cement. Rigging up started May 2, and the rig was being torn down on May 28. The well was drilled to 8749 feet.

The company, a drilling contractor, keeps a complete record of the mud, and employs petroleum engineers who give their full time to this detail. A chart of each well is made to show the percent of sand by volume, viscosity, and weight of mud. The condition of the mud is plotted against depth and time, and the finished chart tells a complete story.

Wells in the Dickinson field are completed immediately above the 9000-foot level, and when the field was discovered three years ago it was regarded as a very deep producing area. It now is regarded as a typical deep seated Gulf Coast salt dome, and drilling has been reduced to ordinary routine by an improved technique. Enough drilling has been done to eliminate much of the coring that was necessary during early field operations.

Several changes and refinements in the mud system were made after experience and experiments had shown the need for adjustments. The large openings in the drilling bits showed an immediate improvement in mud volume, but even with the full hole principle there is a limit to the size of bit openings that give the desired sluicing and jetting effect in soft formations. A strong washing and disturbing action is needed in the bottom of the hole to start the cuttings on their way upward, and this turbulence is especially desired where hole is being made at a rapid rate. In keeping the mud system in balance, the holes in the bit are an important consideration.

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Specially heat treated side bars, pins, bushings and rollers give Baldwin Super Service Oil Field Chain their ability to withstand shock, and durability under constant hard usage. It is especially designed to meet the needs of deep well drilling, where it will deliver 24-hour service day after day.

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ASK THE DRILLER .. *He Knows*

BALDWIN

FOUR-ENGINE Diesel Rig PROVES ECONOMICAL

By DENIS S. SNEIGR

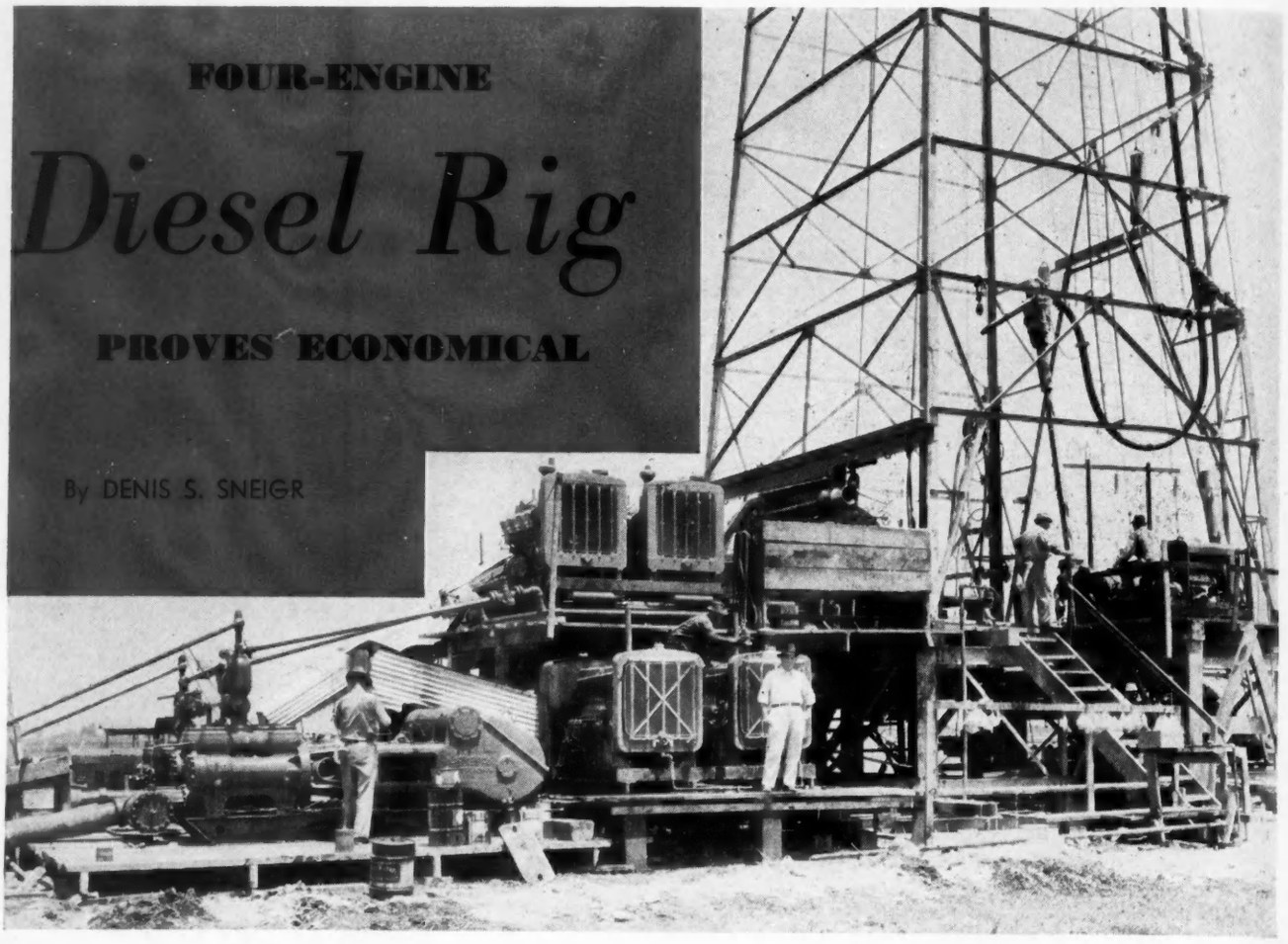


FIGURE 1
Showing arrangement of the four Diesel Engines

A NEW type rig, powered by four Diesel engines, recently made its appearance in the Gulf Coast when H. J. De Arman, Houston drilling contractor, drilled the second hole with this rig near Crosby in Harris County.

The photograph (Figure 1) illustrates the arrangement of the Diesels. Figure 2 was taken from the opposite side of the derrick. The two engines mounted on a level with the derrick floor are V-8 cylinders with a maximum horsepower of 160 each. These engines have a 5¾-inch bore and an 8-inch stroke with a piston displacement of 1662 cubic inches. Governed at full load, the revolutions per minute is 850.

Gear Connected to Draw Works

These two V-8 engines are connected through a gear box to the draw works, being so arranged that either one or both engines may be used. When coming out of the hole, both engines are used on the draw works, but for drilling only one of the motors is employed—the engine on the right in Figure 1. The engine on the left is connected by a V-belt drive to a small auxiliary mud pump.

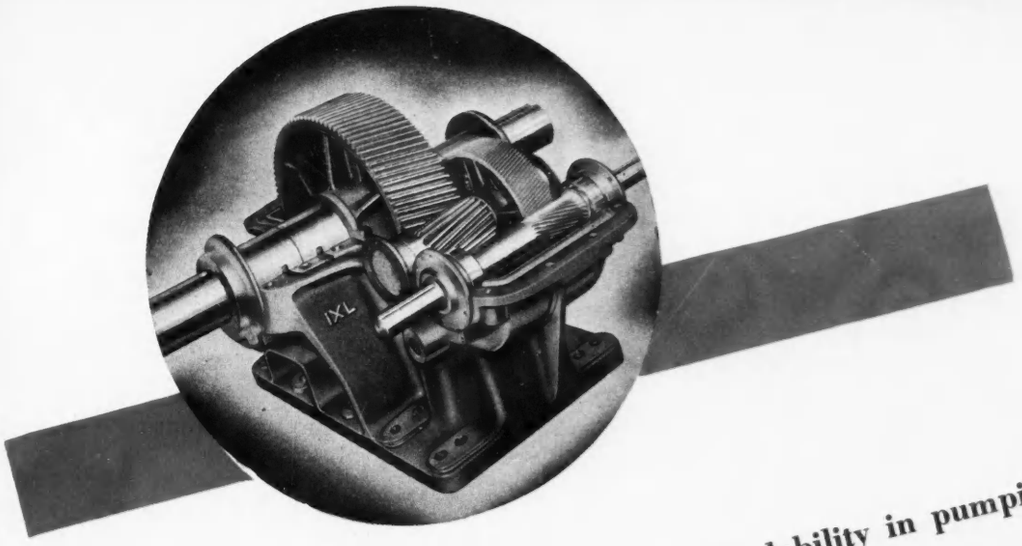
On each of the V-8 Diesels, an auxiliary shaft operates a fuel pump which draws the fuel oil from two 850-gallon tanks situated about 100 feet from the derrick. A by-pass on these engines returns the excess fuel to the tanks.

The two lower Diesels shown in Figure 1 are 6-cylinder motors with a maximum horsepower of 125. The bore, stroke and revolutions per minute, are the same on these engines as on the V-8 motors. The piston displacement on the 6-cylinder engine is 1246 cubic inches. These two motors are compounded to operate the large 7¼-inch x 18-inch mud pump shown at the extreme left in Figure 1. Mounted directly on the two 6-cylinder engines are fuel tanks which are gravity filled from the two 850-gallon storage tanks.

Two small gasoline engines complete the motive power on this rig. A V-8 engine is used to drive the wire line coring set-up and a small gasoline engine drives the light plant generator and an air compressor. Compressed air flows the water well, and a 6-horsepower pump maintains a constant pressure at all outlet points. A by-pass on the water pump returns the excess water to the storage pit.

The transmission—chain driven with positive clutches— has four speeds, including one reverse. This unit is mounted at three points, two bearings and one rubber mounted support. The rubber mount acts as a shock absorber and results in smooth, almost vibrationless, operation.

In dismantling this rig each engine, the draw



The twin necessities for economy and dependability in pumping equipment have made IXL Helical Oil Well Pumping Reducers the most suitable and popular equipment for bringing down the speed of any prime mover to any desired pumping speed. They are built in both single and double reduction units. There is almost no limit to the type of hook-up possible, from single well units to central geared plants handling several wells at considerable distances apart. IXL units are designed specifically for the severe shock load service of oil field performance. FRICK-REID Engineers gladly co-operate in the selection of the right IXL unit.

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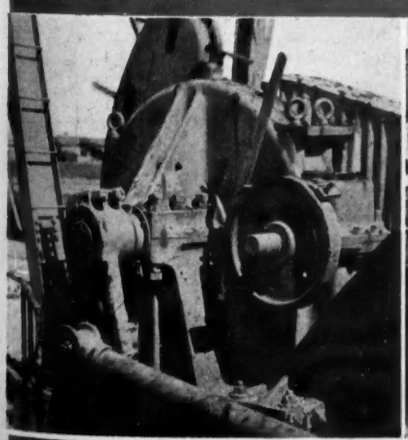
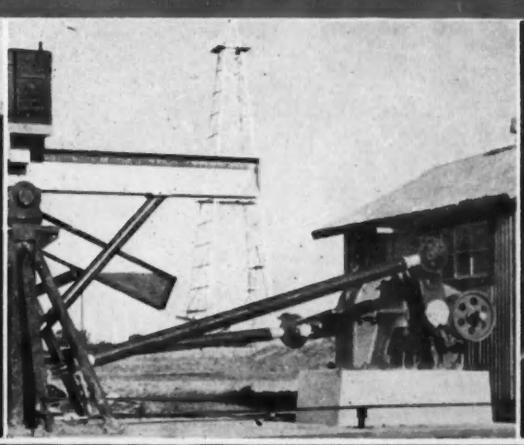
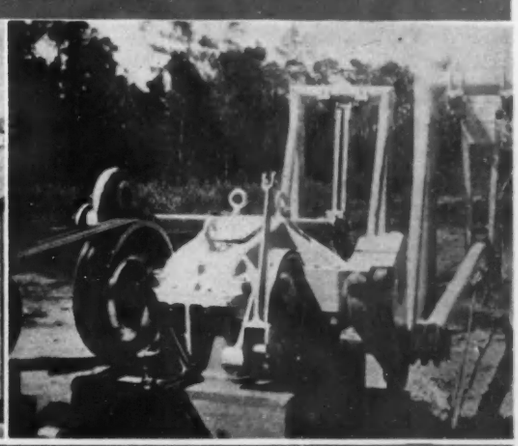






works, the transmission and each pump breaks down as a separate unit. Due to the compactness and comparatively light weight of these units, this rig is ideal for locations which would be inaccessible to the conventional type rig. For locations in arid regions where it is necessary to haul water to the site, this Diesel rig can be operated economically. Very little water is consumed in the radiators, the greatest amount of water is used in mixing the drilling mud.

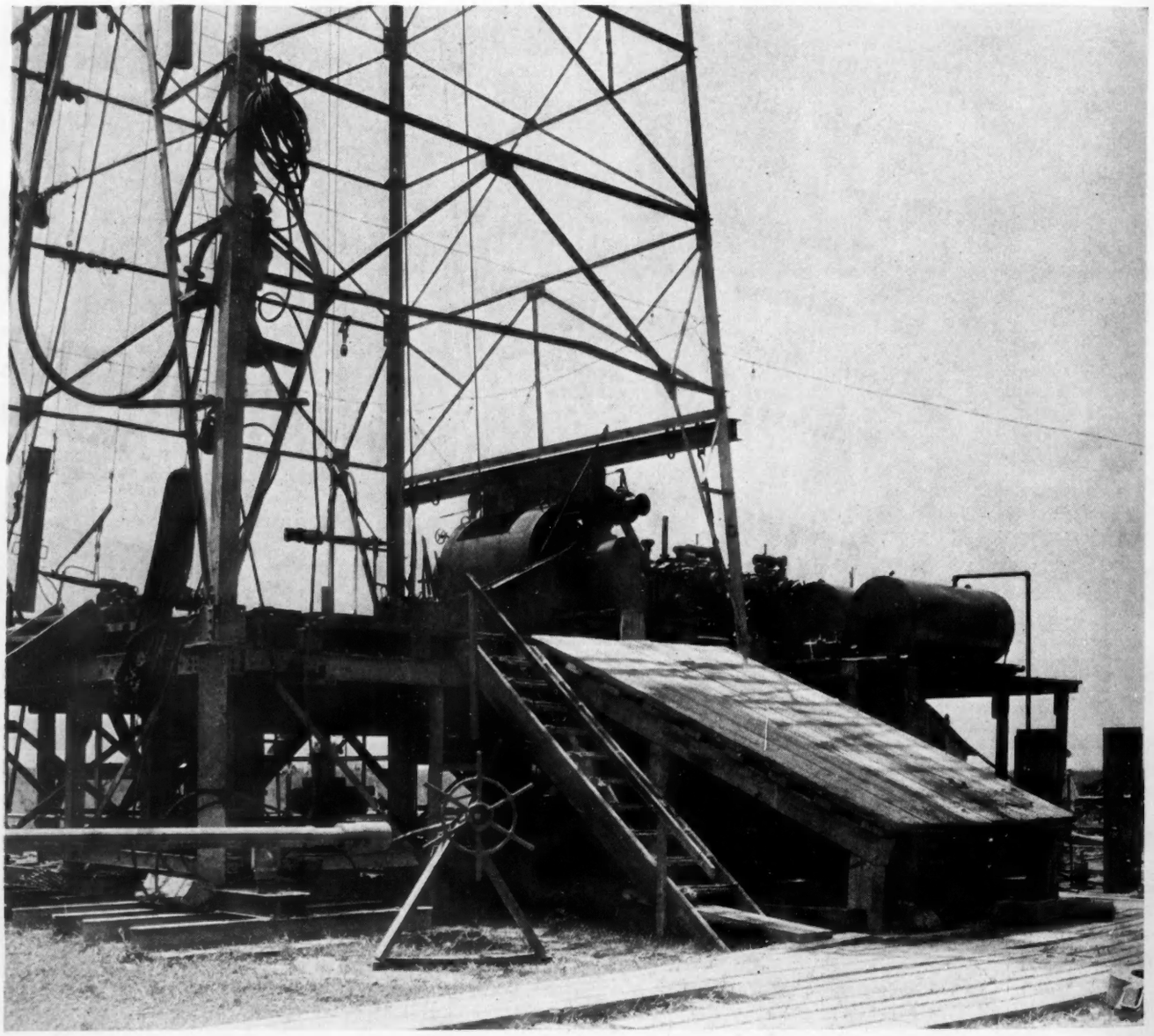
Last August, De Arman drilled the Bowles and Borsodi Ringgold National Bank 1, near Ringgold, Louisiana, and used a Diesel rig similar to his present set-up except that it was smaller. At this location no water was available and all the necessary water for drilling and for mud mixing was hauled to the well in two trucks, while distilled water was used in the radiators of the Diesels and the gasoline engines. Ringgold National Bank 1 was drilled to 5200 feet.

The first well drilled with the present large diesel rig was near Devers for Diadem Oil Company. The second well was the recently completed Tyrell and Garth 1 near Crosby. Currently, De Arman is drilling with this rig on the Smith and Hebert Broussard Trust 1, about five miles southwest of Amelia. The contract depth on this last well is 7500 feet.

The following figures are from records in drilling Tyrell and Garth 1:

Commenced drilling	April 26, 1937
Completed drilling	May 26, 1937
Total depth	7030 feet
Diesel fuel—7000 gallons	$491.82
Lubrication oil and grease—275 gallons	170.25
Gasoline for light plant and wire line coring, 1900 gallons	180.50
Total	$842.57

FIGURE 2
A view of the rig from the opposite side shown in Figure 1



The Petroleum Engineer and the Oil Company

By R. H. McLEMORE,
Petroleum Engineer,
Sun Oil Company

WITHIN the past five or six years, the colleges and universities of the United States, and of the Southwest in particular, have been graduating a steadily increasing number of men with a degree in petroleum engineering. For the most part, this degree indicates a sound general course in the principles of engineering, including full courses in higher mathematics and physics, together with a reasonable knowledge of geology and oil and gas drilling and development. With this training, and a period of time in the field learning the rudiments of the industry, they should be equipped to hold a position that all the major companies are recognizing as a necessary post within their field personnel; that of petroleum engineer.

In the not very distant past the engineer played a comparatively small role in the production department of an oil company. Of course, engineers were needed and were used to aid in solving the technical problems that arose daily in the industry; but on the whole, the industry did not have the multitude of technical problems that confront it today. With the advent of diminishing allowables and increasing drilling costs, it has become necessary to decrease the production expense in every way possible. It has been found that a person, who has a technical training, together with a working knowledge of the elements of production and drilling, and who will work in conjunction with the experienced field superintendent, who often lacks the technical training, can reduce this production expense to a large extent. This is the field that has been opened to the petroleum engineer.

Period of Training Necessary

For a company to realize the utmost value from an engineer, whom they hire immediately after graduation, it is necessary that he go through a period of training. This does not mean that there is a period of time when he is a liability to them; as they will usually find that he is as able and willing to do any work that an oil field worker does, and will be just as much an asset to them as the other workers. Of course, there are exceptions to the above, in which case the company uses its own discretion as to the status of the new engineer. This period of training should include work done in the producing department, both pumping and flowing, and in drilling; the time spent in each phase depending upon the adaptability of the person to each individual phase, and with a view to the position probably to be open for him in the future. When he has proved his merit and ability, and has had sufficient experience to know the fundamentals of the practical problems in drilling and producing, he is ready to assume the position for which he was needed in the beginning.

The engineering graduate, as he goes out on the first job, should realize that he has secured the position, mainly, because of a potential future value that he might be to the company, and that certain definite things are expected of him. They expect him to realize that for the time being he is still a student. They expect him to go out with a drilling crew, or a roustabout crew, and do his full share of the work, at the same time learning the details, and the how and why of the machinery and equipment used. He should not make the mistake of letting a false pride keep him from asking questions of those more experienced men with whom he is working.

When the student assumes his position as field engineer, he should do so with full knowledge of the responsibilities that it carries. He has very definite functions to perform in three operations of the company: geology, drilling, and production.

Geological Work

The present arrangement between the producing and geological departments of many oil companies is an outgrowth of the rapid development of a new industry, instead of a systematic organization formed to meet existing conditions. It is becoming increasingly important that there be more cooperation, and a better understanding, between these two departments. What is often assumed to be a lack of cooperation is only a lack of understanding, due to each department's not having full knowledge or realization of the value of the other to the company as a whole. This can be remedied only by having in future a personnel working in conjunction with both departments. In this way he will be able to gain first hand value of each department and its work. Then, when he assumes a position of responsibility in either department, he is more cognizant of the problems with which he is confronted.

His duties, so far as geology is concerned, are to keep up with the geologic development of the field, and to note any unexpected changes in the geologic picture as the drilling and development are carried on. He should keep accurate logs and cross sections on all the wells that have any possibility of affecting his company's leases; and be ready to present his findings to the geologic departments as they have

need of them. It is often that some very valuable data are lost to the geologic department because they are unable to keep a man in the field at all times during its development; and the field superintendent, being rushed for time, and not having a knowledge of what will prove valuable to the geologic department, does not keep up with all the phases of the geologic development. An engineer in the field, with training in geology, and a small amount of coaching from an experienced geologist, can prove invaluable in this phase of the work. In addition to this, he can oversee the collection of cuttings and samples from his own and other wells, thus saving the company the expense of having another man on the drilling wells.

Drilling Training

In the drilling end of the industry, he should attempt to work closely with the drilling superintendent, and be of help to him in any way that he sees fit. He should learn the formation characteristics insofar as they affect the drilling fluid, so as to have the mud in condition at all times, at a minimum of expense for material. He should see that the deviation of the hole is kept within bounds, and that the drillers are following the orders given by the company. He should be on hand, whenever possible, at all important phases of the well completion, in order that he can take over this work in the event of the absence of the drilling superintendent.

He should check all pipe measurements, and see that all drilling reports are in order before they go into the office, as errors of this nature are often not detected after leaving the field, and will occasionally cause uncertainty and dissatisfaction in the future production life of the well. He should, in every way possible, familiarize himself with the drilling equipment and methods, and try to equip himself to be able to oversee the job satisfactorily in case of necessity.

Production Requirements

In the production end of the business, many problems confront the engineer. He is at first interested in prolonging the flowing life of the wells as far as possible. He watches carefully any increase or decrease in quantities of gas produced. He sees that bottom-hole pressures are taken at regular intervals and keeps an up-to-date chart on each well, showing the change of pressure, gas quantity, production, and any other change that might prove valuable information at a later date. From these data he is able to arrive at a reasonably accurate figure for the flowing life of the field, and should be able to foresee when artificial light equipment will be needed and to recommend and pass on installation of adequate pumping or other facilities, so that there will be a minimum of time lost when the pump is needed.

This program will result in an increase in an oil company's producing efficiency, in an ever increasing way. At a small additional outlay of production expense, they will find that they have a smoother operating department, and a knowledge of the field operating conditions that will pay rich dividends in lower lifting costs and greater ultimate recovery. Ten years hence they will find that they have a group of trained men from which they can draw their field superintendents and men for other responsible positions. This will result, eventually, in field superintendents with a good knowledge of field geology, and geologists with first hand information of drilling and producing problems.

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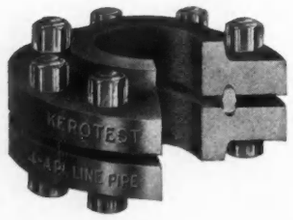

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Kerotest rigidity prevents expansion of the threading under repeated "making up" and "breaking down". It also prevents the natural tendency to bend or close in when undue pressure is applied to bolting.

Each flange is grooved with extreme accuracy and finish to provide the proper seat for the Endless Armco Ingot Iron Gasket. Bolting consists of high tensile heat treated alloy steel studs having hexagon nuts on each end—built for the most severe service and pressure conditions.

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MEN IN THE INDUSTRY'S NEWS

FRANK M. BREWSTER, of Belmont Quadrangel Drilling Corporation, was elected president of the Pennsylvania Natural Gas Men's Association when the organization held its annual meeting last week. He succeeds H. D. Freeland, of Waynesburg. W. H. Locks, vice president of Natural Gas Company, Oil City, was reelected vice president, and B. H. Smyers, Jr., was renamed secretary-treasurer.

The following are directors: G. E. Bennett, president of Manufacturers Light & Heat Company, Pittsburgh; H. D. Freeland, Waynesburg; T. B. Gregory, president of Union Heat & Light Company, Emlenton; S. W. Meals, president of Carnegie Natural Gas Company, Pittsburgh; F. R. Phillips, president of Philadelphia Company, Pittsburgh; T. W. Phillips, Jr., president of T. W. Phillips Gas & Oil Company, Butler; S. C. Preston, vice president of Peoples Natural Gas Company, Pittsburgh; F. F. Schauer, vice president of Equitable Gas Company, Pittsburgh; George E. Welker, president of United Natural Gas Company, Oil City; George Wittmer, Jr., president of American Natural Gas Company, Pittsburgh, and J. F. Robinson, president of Peoples Natural Gas Company, Pittsburgh.

F. A. SMITH, Calgary, director of Canadian Western Natural Gas, Light, Heat & Power Company, Ltd., was named president of the Institute of Chartered Accountants of Alberta at the annual meeting of the organization at Edmonton last week.

COLONEL W. C. O'FERRALL, El Dorado, Arkansas, for 15 years division superintendent of the Standard Oil Company of Louisiana in charge of operations in Arkansas, and more recently production manager for the Lion Oil Refining Company, has joined Eddie Jones, San Antonio, Texas, operator.

MAYNARD J. DAVIES, president of Davies Petroleums, Ltd., has returned to Calgary, Alberta, following a business trip to the west coast of Canada.

EMERY G. FRIEDMAN, pipe line department foreman in the Toteco District, Mexico, for the Mexican Gulf Oil Company, was married July 10 to Miss Elda Garcia at Monterrey, Mexico. After a wedding trip to the United States, they will make their home in Tampico.

AUGUST F. BECK, geologist formerly with Carter Oil Company, has been appointed head of the geophysical department of Indian Territory Illuminating Oil Company at Bartlesville, Oklahoma.

F. H. McGUIGAN, formerly in the geological department of Shell Petroleum Company in Midland, Texas, has entered the consulting business there.

GLENN D. ROBERTSON, geologist with Shell Petroleum Company, has returned to Houston after an absence of 17 months, 10 of which were spent at The Hague and 7 in St. Louis.

R. LLOYD WHEELOCK, former president of the Texas Petroleum Council, twice mayor of Corsicana, and an old timer among Texas operators, July 3 was host to about 1000 guests at a barbecue given on the Wheelock ranch near Corsicana. Helping Wheelock celebrate the occasion was Jim Collins, who served his apprenticeship as a roughneck in West Virginia and pulled Wheelock from behind a drug store counter in the Mexia boom days of 1921 to form a drilling concern.

The crowd at Wheelock's barbecue came from all parts of Texas and Oklahoma. R. D. Parker, former chief supervisor of the Texas Railroad Commission and now a consulting petroleum engineer, was there. So were H. Weiss, John Suman and W. W. Scott of Humble Oil & Refining Company. George Goad of Tide Water Associated Oil Company and George Sawtelle of Kirby Petroleum Company were there, as was J. W. Selby of Shell Petroleum Corporation. W. R. Boyd, executive vice president of the American Petroleum Institute, came down from New York.

R. LLOYD WHEELOCK

GEORGE R. PINKLEY was the speaker at the Houston Geological Society's weekly meeting July 8, and discussed the geology of McMullen County, Texas.

THOMAS B. SCOTT, executive of Carter Oil Company, has resigned to become an independent operator. His office is in Tulsa.

FRED C. COCHRAN, material department of Magnolia Petroleum Company at Wewoka, Oklahoma, has gone to Colombia, South America, in the service of Tropical Oil Company.

DR. F. R. BAXTER, retired chief chemist of Vacuum Oil Company, Rochester, was honored by more than 500 officials and employes of the Socony-Vacuum Oil Company July 1 during the annual outing of the Twenty Year Club of the Olean, N. Y., works. The event marked Dr. Baxter's 80th birthday. During the day, a spruce tree was planted on the lawn of the Gargoyle Park clubhouse as a lasting memorial to Dr. Baxter. Speakers at the event included Dr. John C. Armstrong, honorary charter member of the club and C. W. Hadley, retired director of the firm.

S. A. MORSE was named president and general manager of Union Gas Company, when shareholders held their annual meeting in Toronto last week. Directors are D. A. Coste, W. L. Duffield, C. M. Kennedy, R. L. O'Brian, D. P. Rogers, W. J. K. Vanston and A. F. White.

A. M. MORRISON was reelected president of Inland Petroleums, Ltd., when shareholders held their annual meeting in Coleman, Alberta, last week. Other officers named are George Fisher, vice president; F. H. Cox, E. K. Stewart, G. E. Cruickshank, F. M. Thompson and A. M. Dunsmore, directors.

FRED O. JACKSON has been made chief scout for Phillips Petroleum Company at Bartlesville. He joined the concern in 1925.

H. S. McCLINTOCK resigned as chief scout of Phillips Petroleum Company to become manager of the land and leasing department of Sunray Oil Company.

C. E. SAVAGE, chief scout of Carter Oil Company, Tulsa, is vacationing with his family at Lake Francis, Arkansas.

R. J. DAUGHERTY, one time mayor of Bartlesville, Oklahoma, has been appointed director of industrial relations for Empire Oil & Refining Company there. Public and industrial relations departments of the company have been combined.

J. B. LEISER, Shell Petroleum Corporation at Tulsa, is on his way to The Hague, Holland, where he will spend the next year working for Royal Dutch Shell. He has been Kansas regional geologist for the Tulsa concern.

E. F. KINDSVATER, Phillips Petroleum Company, Bartlesville, has been appointed chairman of the topical committee on materials of the American Petroleum Institute. He succeeds C. W. Froome, resigned.

L. H. PORTER, manager of New England Fuel Oil Company of Mexico, has returned to Tampico after a combined business and pleasure trip to the United States.

R. M. O'LOUGHLIN, graduate engineer from Oklahoma University, has been employed by Stanolind Oil & Gas Company at Houston.

A. H. SEABROOK, general manager of Kern Mex Oilfields, S. A., has returned to headquarters at Tampico, Mexico, after a trip to California.

GENERAL G. E. McCUAIG, Montreal, was added to the directorate of United Oils, Ltd., when shareholders held their annual meeting in Calgary, Alberta, last week. Other directors are R. A. Brown, Sr., F. J. Green, and W. M. Connacher.

R. J. SALYERDS, J. W. PAUL and **BIRCH TENNANT,** who have been developing wells in the lower Ohio and West Virginia fields, have organized Black Diamond Gas & Oil Company.

JAMES BRADBURY, assistant manager, Mexican Gulf Oil Company, returned to Tampico after a business trip to the states.

J. ELMER THOMAS, well known in geologist circles in the United States, is in Moscow attending the Seventeenth International Geological Congress.

ELTON STERRETT, chief engineer for Arkansas Pipe Line Company at Longview, Texas, was a visitor in Houston this week.

H. E. MINOR, chief geologist for Gulf Oil Corporation at Houston, and his family are spending their vacation in Colorado.

E. H. MOORE, president of E. H. Moore, Inc., and Mrs. Moore, have returned to their home in Tulsa after a European trip.

M. J. DELANEY, drilling contractor and independent oil operator of Dallas, is on a trip to Hawaii.

DIED:

J. H. FERRY of Lima, Ohio, vice president and director of The Illinois Pipe Line Company, died in Lima July 3 after an illness of two months.

Ferry was born in Titusville, Pennsylvania, May 1, 1873. At the age of 14 he was an employee of Lima Drilling Company, which was taken over by Ohio Oil Company in 1887. In 1892 he was transferred to Indiana Pipe Line Company, helping to build that organization's system.

Prairie Oil & Gas Company was expanding in 1905 and Ferry was called in to build some pump stations, but was called back to Ohio Oil Company as chief engineer at the Bluffton, Indiana, station in 1907. Six years later he became superintendent of the eastern half of the company's pipe line system. This extended from Bluffton to Negley, Ohio.

Just prior to Ferry's death he was awarded a 50-year service button by the company, a distinction held by only two other employees. Another honor accorded Ferry recently was the re-naming of Bluffton station "Ferry" station.

He is survived by Mrs. Ferry, five daughters, 10 grand children and two sisters.

ETSEL WHARTON, 33, employe of Skelly Oil Company at Tulsa, was drowned July 4 in Spavinaw lake, 60 miles east of Tulsa. Funeral services were held July 8 at Parkersburg, West Virginia.

Pipe Line News

Plans for extensive enlarging of Pennsylvania gas system fail because charter not granted.

PLANS to serve 115,000 customers of five United Gas Improvement Company affiliates in Pennsylvania with natural gas from West Virginia fields have been abandoned, for this year at least, by Columbia Gas & Electric Company, which sought a state charter through its subsidiary, Pennsylvania Gas Transmission Corporation, to pipe the natural gas across nine Pennsylvania counties.

Harrisburg Gas Company, one of the five distributing companies which would furnish natural gas under the plan, renewed its contract for artificial gas from the Bethlehem Steel Corporation's Steelton mills. The company, in announcing the contract, said that "because of the failure of Pennsylvania Gas Transmission Corporation to obtain a charter from the state it becomes impossible to fulfill its hope to furnish natural gas this year and furthermore, the outlook for the future in this regard is not encouraging."

Other companies whose plans to switch from manufactured to natural gas hinge upon the charter application of the transmission company are Lebanon Valley Gas Company, Allentown-Bethlehem Gas Company, Reading Consumers Gas Company and Chester Light & Power Company. Plans to extend the line to Wilmington, Delaware, also hinge upon the application. It is estimated that the Pennsylvania consumers affected would realize annual savings of $700,000, with an additional saving of $225,000 to Wilmington gas consumers, if the proposal is carried to completion.

Protests to the proposal have been entered from the anthracite regions. It was claimed that the substitution would reduce the market for anthracite and create more unemployment in the hard coal belt.

Those named as incorporators on the transmission company application, now on file with state officials for over four months, are H. E. Cooper, Sewickley; T. B. Gregory, Emlenton; David E. Mitchell, J. Frank Robinson, Thomas R. Weymouth and Don M. Wilson, all of Pittsburgh. Directors, in addition to the incorporators, are Walter G. Veckford, Pittsburgh; Ed Reynolds, Jr., Stamford, Conn.; H. A. Wallace, Charleston, W. Va.; W. A. Daugherty, Phillip C. Gossen and S. H. Leech, Jr., all of New York.

POZA RICA STRIKE

Government trying to end labor trouble

Mexico City, Mexico, July 9. — A strike for higher wages and other economic benefits halted all work at the Poza Rica unit of Compania Mexicana Petroleo, El Aguila, S. A., including pumping oil to Tampico for export. The government is attempting to put an end to the tie-up.

Poza Rica field is the company's richest property in Mexico. It is regarded by many as the nation's greatest crude reservoir, being to Mexico about what East Texas field is to Texas.

TEXAS OFFERS LAND

More than 100,000 acres submerged leases put up

Austin.—More than 100,000 acres of submerged areas have been offered for lease during the month of July by two state agencies.

On July 13 the board for mineral development, which is composed of the land commissioner, the railroad commission and the governor, will open bids on the beds of five rivers. On July 27, the land commissioner will open bids on several thousand acres of submerged lands belonging to the state school fund.

The mineral development board offered the following river beds:

Trinity river bed, Freestone and Anderson Counties, 10 tracts of 10 acres each.

Brazos river bed in Brazoria County, two tracts of 50 acres each.

Colorado river in Wharton County, 10 tracts of 20 acres each.

Nueces river in McMullen County, one tract of 45 acres.

Sabine river in Gregg County, six tracts of 10 acres each.

The board is requiring a minimum cash bonus of $10.00 an acre for the Sabine river and $5.00 an acre for the other four rivers. The land office notice included these areas.

Jefferson County Gulf of Mexico lands, consisting of 24 tracts of 480 acres each. The tracts are a quarter of a mile wide and three miles long, beginning at the intersection of the W. P. McFadden east line with the shore line.

In Calhoun, Victoria and Jackson Counties the commissioner offered in one tract 1170 acres of the Ramon Musquiz Survey in the permanent lakes and marshes.

In Aransas and Nueces Counties, the commissioner offered most of Copano, St. Charles, Aransas and Red Fish bays. They were divided into 235 tracts ranging from 35 to 320 acres each and most of them were 320 acre tracts.

In Matagorda County several separate submerged areas were offered.

Ninety-five tracts, most of them 100 acres each, but ranging from 45 to 168 acres, were in Tres Palacios river and bay.

In Matagorda bay 41 tracts, most of them 320 acres, were offered.

In Turtle bay there were 19 tracts offered, ranging in size from 43 to 137 acres.

Prices May Increase

LOCAL BOOSTS RECORDED AND SOME PREMIUMS BEING PAID

MARKETS lately have been giving indication that some further price increases may be impending for crude oil as well as refined products.

Postings were increased last week for heavier oils produced in Refugio and Mirando districts of South Texas, and prices of refined oils held steady in most districts of the country, with demand running high.

Gasoline Market Steady

Gasoline inventories are at economic levels, and since heavy tourist travel is causing large consumption, it is felt by some that gasoline prices, at refineries and service stations, may work higher.

Meanwhile, the prices for kerosene and fuel oils also are firm.

The favorable markets for the petroleum products give promise that paying of premiums for crude may increase, and that higher crude postings will result.

Crude Control Better

Meanwhile, the crude market is being strengthened by the better control of production this month and last month, under stricter allowables of the leading producing states. In June the running of crude to storage was virtually stopped, as output was brought about into balance with demand, following four months of imperfect control of production. Similarly effective regulation of the country's oil wells is promised, moreover, for this month, as the July production allowables are about as strict as those of June.

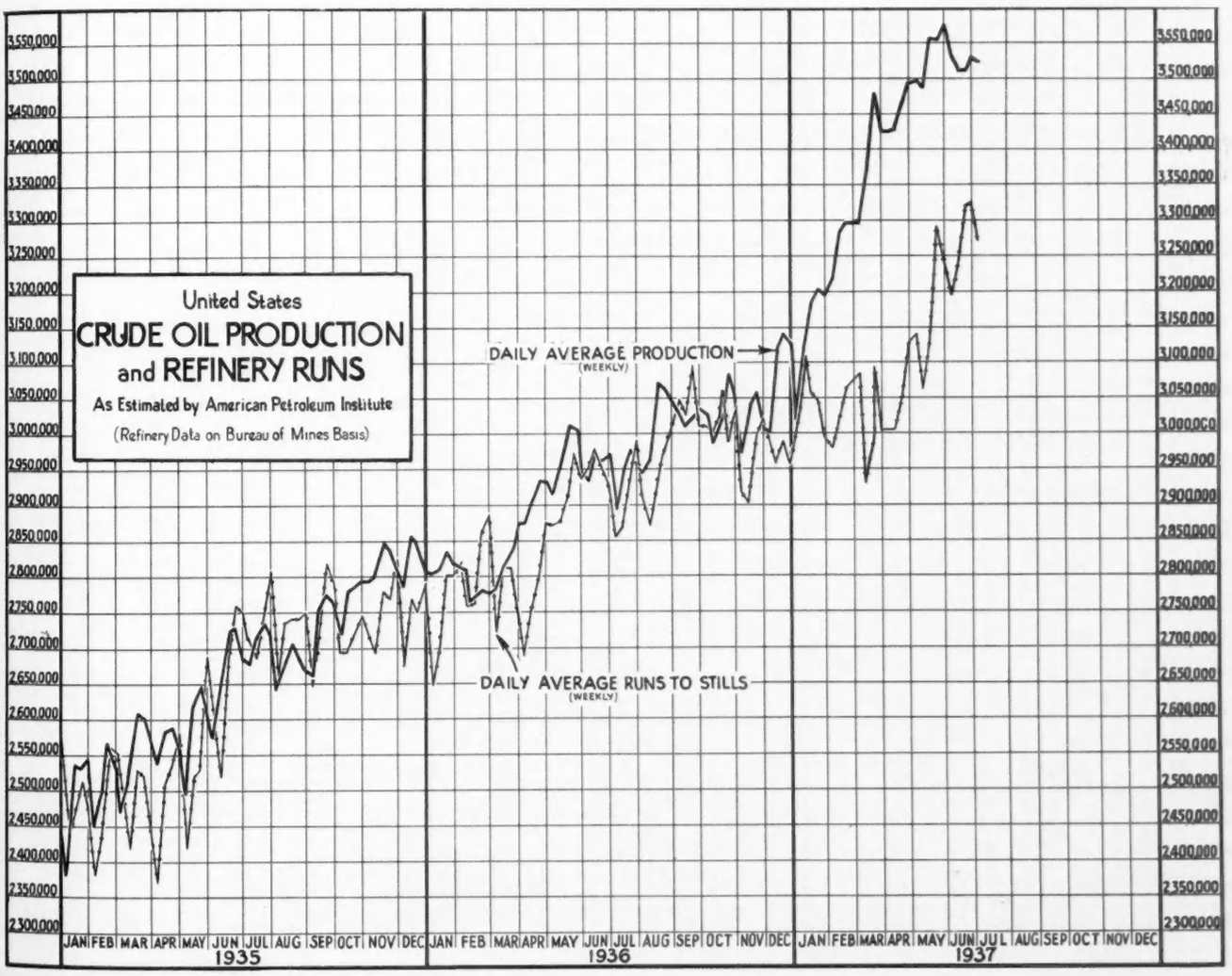
Prices Tend to Rise

Last week's price raises in South Texas gave further concrete evidence that the crude markets are fundamentally strong, and that the prices are tending to rise. Similar evidence already was at hand previously, since earlier weeks had brought the increases in postings for Pennsylvania grade and East Texas crudes.

Furthermore, the present strength of the crude markets is attested by reports of the paying of premiums above the regular postings for crude in various districts, including East Texas.

Statistics Favorable

Recent statistics have furnished further encouragement. Gasoline stocks were drawn upon substantially again in



the week ended July 3, as consumption continued heavy. The total storage of finished and unfinished gasoline came down 755,000 barrels, to 74,672,000 barrels, which was about 9,000,000 barrels under the all time peak set March 27.

At 74,672,000 barrels, the gasoline inventories of July 3 were 11 percent larger than the 67,040,000 barrels held July 4 last year. But such an increase in the gasoline stocks is justified, as gasoline consumption is running about that much higher than it did last year.

Fuel oil stocks continue considerably smaller than a year ago, despite the fact demand is higher, and the fuel oil market consequently remains strong.

Crude oil stocks on hand June 26 were but slightly changed from three weeks before, reflecting the effectiveness that now characterizes the regulation of crude production.

South Texas Crude Prices

The revision of prices for the Mirando and Refugio districts of South Texas was effective July 6. The change was initiated by Magnolia Petroleum Company, the concern that started the 8-cent increase for East Texas crude some weeks ago. The revision did not affect prices of 26-26.9 gravity or lighter crudes, but raised postings of the heavier oils one to six cents a barrel.

Weekly Trends of United States Production and Stocks

(Figures American Petroleum Institute, except Crude Stocks, Bureau of Mines)

WEEK ENDED	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	Gas & Fuel Oil Stock (Barrels)
January 2, 1937	3,121,400	3,030,000	287,659,000	62,661,000	106,330,000
January 9	3,117,800	3,110,000	286,912,000	65,402,000	105,971,000
January 16	3,184,650	3,045,000	286,044,000	66,559,000	104,841,000
January 23	3,205,150	3,055,000	285,211,000	68,180,000	103,441,000
January 30	3,194,050	2,995,000	285,384,000	69,540,000	102,078,000
February 6	3,220,750	2,980,000	286,116,000	70,535,000	101,136,000
February 13	3,286,050	3,020,000	286,158,000	73,585,000	100,735,000
February 20	3,295,950	3,065,000	287,574,000	74,798,000	99,391,000
February 27	3,296,100	3,085,000	288,121,000	78,786,000	99,534,000
March 6	3,298,800	2,930,000	289,611,000	80,102,000	99,115,000
March 13	3,372,850	2,985,000	290,613,000	81,236,000	98,964,000
March 20	3,448,150	3,095,000	291,555,000	81,623,000	97,287,000
March 27	3,431,300	3,060,000	293,587,000	*83,538,000	96,591,000
April 3	3,422,350	3,005,000	297,374,000	83,157,000	95,805,000
April 10	3,426,300	3,005,000	297,468,000	82,579,000	94,581,000
April 17	3,463,550	3,055,000	298,932,000	82,703,000	94,472,000
April 24	3,496,400	3,125,000	300,737,000	82,303,000	94,100,000
May 1	3,497,450	3,140,000	303,249,000	81,407,000	94,291,000
May 8	3,489,200	3,065,000	304,148,000	81,469,000	94,874,000
May 15	3,551,950	3,135,000	305,365,000	80,378,000	95,316,000
May 22	3,550,450	*3,290,000	304,971,000	79,827,000	95,111,000
May 29	*3,573,000	3,245,000	306,445,000	78,758,000	96,139,000
June 5	3,538,150	3,195,000	307,223,000	77,494,000	97,402,000
June 12	3,515,900	3,250,000	307,199,000	76,996,000	98,158,000
June 19	3,510,950	3,320,000	307,465,000	76,574,000	99,215,000
June 26	3,529,600	3,235,000	307,679,000	75,427,000	100,395,000
July 3, 1937	3,525,650	3,270,000	.....	74,672,000	101,184,000
July 4, 1936	2,892,300	2,855,000	310,618,000	67,040,000	105,293,000

*All time peak.

Summary of Wells Completed in the United States Week Ending July 10, 1937

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total 1937	Total this Date 1936
Alabama	....	....	....	....	.....	1	2
Arkansas	....	....	....	....	.....	44	49
California	26	21	....	5	8,710	718	591
Colorado	....	....	....	....	.....	6	6
Florida	....	....	....	....	.....	....	1
Illinois	4	2	....	2	1,829	63	4
Indiana	....	....	....	....	.....	58	121
Kansas	61	37	2	22	43,400	1,314	835
Kentucky	18	10	5	3	151	162	125
Louisiana	17	9	2	6	3,157	440	555
Michigan	25	24	....	1	16,215	463	407
Mississippi	....	....	....	....	.....	6	5
Montana	....	....	....	....	.....	76	71
Nebraska	....	....	....	....	.....	....	.....
New Mexico	12	11	....	1	9,100	370	301
New York	....	....	....	....	.....	6	.....
Ohio	31	9	11	11	116	757	1,011
Oklahoma	120	85	5	30	97,670	1,691	1,540
Pennsylvania	5	....	4	1	.....	90	.....
Texas	339	246	10	83	337,460	7,860	6,530
Utah	....	....	....	....	.....	....	.....
West Virginia	19	5	12	2	7	461	380
Wyoming	....	....	....	....	.....	53	32
Total this week	677	459	51	167	517,815	14,639	15,566
Total last week	521	372	37	112	461,189	....	.....
Total this year	14,639	10,116	1,175	3,348	12,306,722	....	.....

CRUDE OIL PRICES

Crude oil prices late last week remained the same as shown in The Oil Weekly of July 5, 1937, page 58, with exception of new postings for the Refugio and Mirando districts, South Texas.

In those districts, moreover, prices were left unchanged for 26 - 26.9 and higher gravity crudes. The changes involved only the heavier oils, and represented increases of 1 to 6 cents a barrel, depending on gravity.

The new schedules for the Refugio and Mirando districts, effective July 6, are as follows:

GRAVITY	†Refugio, Tex. Type	‡Mirando, Tex. Type
17–17.9	.....	.....
18–18.9	.....	.....
19–19.9	.....	.....
20–20.9	*$1.01	*$0.96
21–21.9	1.03	.98
22–22.9	1.05	1.00
23–23.9	1.07	1.02
24–24.9	1.09	1.04
25–25.9	1.11	1.06
26–26.9	1.13	1.08
27–27.9	1.15	1.10
28–28.9	1.17	1.12
29–29.9	1.19	1.14
30–30.9	1.21	1.16
31–31.9	1.23	1.18
32–32.9	1.25	1.20
33–33.9	1.27	1.22
34–34.9	1.29	1.24
35–35.9	1.31	1.26
36–36.9	1.33	1.28
37–37.9	1.35	1.30
38–38.9	1.37	1.32
39–39.9	1.39	1.34
40 & Above	1.41	1.36

*Minimum price and applies also to purchases of lower gravity.

†Lower Texas Gulf Coast, including Refugio, Saxet, etc.

‡Duval, Jim Hogg, Webb and Zapata Counties; Heyser, Placedo fields.

Humble Oil & Refining Company met the new Magnolia prices and also made a similar revision of the schedule for Refugio type crudes, raising prices one to six cents a barrel for 25-25.9 and lower gravity oils.

Mid-Continent Prices

Tank car prices late last week continued mostly the same as a week before.

U. S. motor gasoline f.o.b. Oklahoma refineries was ranging from 5 to 5¼ cents a gallon for the 62 octane and below, from 5⅜ to 5¾ cents for the 63 to 67 octane, and from 6 to 6⅛ cents for the 68-70 octane material.

Comparison of Permits Granted for New Wells

STATE	Week Ending July 10	Total this Mo.	Total this Year	Total this Date Last Year	1936 Year Total
Arkansas	6	16	112	52	103
California	26	53	825	496	1,054
Louisiana	27	63	663	623	1,107
Kansas	57	113	1,411	902	1,873
Michigan	17	29	522	361	762
Oklahoma	105	151	1,627	1,519	2,594
Texas	185	642	9,607	7,606	15,582
Total	423	1,067	14,767	11,559	23,075

Output Up Again

PRODUCTION 110,075 BARRELS ABOVE RECOMMENDED FIGURE

UNITED STATES crude oil production showed an increase in the past week, ended July 10, averaging 3,533,800 barrels daily. That was 22,225 barrels a day more than in the previous week and 110,075 barrels a day more than the estimate of consumer demand as determined by the Bureau of Mines.

The increase in output over the previous week resulted from gains in Texas and California that outweighed declines in Oklahoma, Kansas, Louisiana, and New Mexico.

Texas production last week averaged 1,421,700 barrels daily, or 15,900 barrels a day more than in the previous week, and 46,600 barrels a day more than the Bureau of Mines recommendation.

California output was up 10,000 barrels at 666,000 barrels daily, and exceeded the indicated demand 60,500 barrels daily.

Oklahoma production was down 1100 barrels, averaging 618,500 barrels daily, or 11,200 barrels a day less than the indicated demand.

Kansas showed a decline of 825 barrels, as output averaged 192,175 barrels daily, which was 3425 barrels less than the demand estimate.

Louisiana production declined 5450 barrels, to 256,800 barrels daily, and was 3800 barrels above the indicated daily demand.

New Mexico last week averaged 114,300 barrels daily, 200 less than in the previous week and 13,500 barrels a day more than the Bureau of Mines estimate of demand for July.

First Half Year

[*Continued from page 17*]

showed but slight excesses over the forecasts of demand.

Drilling at High Level

Drilling showed further important expansion in June, reaching the greatest proportions for many years, as completions averaged 89.5 wells daily. At that rate, drilling activity was greater than in any month of 1926, the most active year in recent times.

That was considerably more field work than in May, when completions averaged 80.8 wells daily, and was four times as much as in June, 1933, when drilling was near the depression minimum.

Whole Country Active

In the first six months of 1937 completions in the United States totaled 13,474, or 16 percent more than the 11,612 reported for the first half of 1936.

The gain in drilling was general throughout most of the important districts of the country, exceptions being Arkansas, the Eastern States, North Louisiana, the East Texas field, the Texas Panhandle, and West Central Texas, where decreases were registered.

Outstanding increases in drilling, as compared with last year, occurred in Eastern Texas outside the East Texas field and in West Texas, where gains of over 100 percent were shown. Important gains were shown also in Kansas, California, New Mexico, and Coastal Texas.

United States Crude Oil Production

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Recommendation (Daily in July)	ACTUAL PRODUCTION: BARRELS DAILY FOR WEEK ENDING	
		July 10	July 3
TEXAS—			
Texas Panhandle	.....	79,100	83,600
North Texas	.....	72,300	72,900
West Central Texas	.....	33,500	33,200
West Texas	.....	198,400	197,700
East Central Texas	.....	128,600	122,800
East Texas Field	.....	467,300	466,600
South Texas	.....	238,700	232,600
Texas Gulf Coast	.....	203,800	196,400
Total Texas	**1,375,100**	**1,421,700**	**1,405,800**
OKLAHOMA—			
Oklahoma City	.....	149,150	140,575
Seminole Area	.....	118,250	123,650
Crescent	.....	9,725	8,000
Lucien	.....	15,900	15,750
Fitts	.....	85,450	91,500
Edmund	.....	18,500	19,250
Moore	.....	10,250	13,500
Others	.....	211,275	207,375
Total Oklahoma	**629,700**	**618,500**	**619,600**
KANSAS—			
Ritz-Canton	.....	5,600	5,625
Chase	.....	7,375	8,300
Hollow-Nikkel	.....	2,850	2,850
Sedgwick	.....	4,275	4,375
Burrton	.....	14,800	14,225
Lorraine	.....	4,250	4,700
Russell County	.....	30,500	31,850
Silica	.....	18,875	17,650
Others	.....	103,650	103,425
Total Kansas	**195,600**	**192,175**	**193,000**
LOUISIANA—			
North Louisiana	.....	82,700	87,150
South Louisiana	.....	174,100	175,100
Total Louisiana	**253,000**	**256,800**	**262,250**
ARKANSAS	**28,400**	**29,200**	**29,100**
CALIFORNIA—			
Long Beach	.....	60,000	60,000
Santa Fe Springs	.....	44,500	44,200
Huntington Beach	.....	38,000	39,000
Dominguez	.....	26,000	15,600
Inglewood	.....	16,000	14,500
Ventura Avenue	.....	35,500	35,700
Seal Beach	.....	8,500	9,000
Midway-Sunset	.....	78,000	79,600
Elwood	.....	8,500	9,100
Kettleman Hills	.....	80,000	82,000
Mountain View	.....	18,500	19,000
Playa del Rey	.....	8,500	8,500
Wilmington	.....	42,000	40,000
Others	.....	202,000	189,000
Total California	**605,500**	**666,000**	**656,000**
MOUNTAIN STATES—			
Wyoming	52,900	48,800	49,200
Montana	16,200	17,300	17,400
Colorado	4,700	4,400	4,500
Total Rocky Mountain States	**73,800**	**70,500**	**71,100**
NEW MEXICO	**100,800**	**114,300**	**114,500**
EASTERN STATES	**122,100**	**121,800**	**117,600**
MICHIGAN	**39,800**	**42,900**	**42,700**
Total United States	**3,423,800**	**3,533,875**	**3,511,650**

Edited by
WM. V. GROSS, Associate Editor

Treating With Acid

THREE TURNER VALLEY WELLS ARE NEARING COMPLETIONS

CONTINUED successful acid treatment given established producers and the approach of three tests to the completion stage in Turner Valley field commands oil interest in Western Canada. Three previously completed wells were treated during the week, bringing additional production attained in the Turner Valley field since this treatment was introduced a month ago to 5000 barrels daily. Three wells await acidizing, the operations to be undertaken just as soon as acid is available.

Advance Oil Company's 5-A, which came into production as a naphtha well in 1930 and gradually changed over to crude, was yielding 40 barrels a day before treatment last week. Production has been materially increased. Treatment is not expected to bring this well among the large producers of the Valley, but it is eagerly watched by operators as indicative of the value of acidization to older wells.

Foundation Petroleums and Westside Royalties tests were the others treated during the week. It is estimated that the 225-barrel daily yield at Foundation was boosted to approximately 600 barrels settled production. Westside Royalties production was boosted from 225 to 400 barrels daily when treated a few weeks ago. This week's treatment was the second for this well. Other producing wells soon to be treated are B. & B. Royalties, now producing 600 barrels daily; British Dominion Oil & Development Company No. 4, now producing 88 barrels daily, and Century Royalties, now producing 100 barrels daily.

Richland Running Casing

Richland Oil Company's No. 3, which encountered Madison limestone at 5610 feet, was running casing to 5625 feet as the week closed. It was scheduled to resume drilling from 5645 feet this week.

Monarch Royalties was ready to drill out the cement plug following setting of casing to the lime, encountered at 6525 feet. It has been drilled 27 feet into this formation. A strike at this test will materially extend the crude area of the Turner Valley field to the west.

Royalite Oil Company's Sterling-Pacific 5 was drilling below 6552 feet, expected to encounter the lime within a few days. Acid treatment given to this company's Sterling-Pacific 4, reported a week ago, boosted the yield from 1000 barrels daily to 1950 barrels. Flush production was 3500 barrels immediately following the treatment.

Idle since spudded two months ago, North American Petroleums' test on Legal Subdivision 10, Section 5, Township 19, on the west flank of Turner Valley, is to be drilled to completion by a new company — Vulcan-Brown Petroleums, Ltd. Drilling was started last week and the tools were below 600 feet as the week closed. Officers of the new company are R. A. Brown, Sr., president; W. G. Peterson, vice president; J. W. Moyer, secretary, and R. A. Brown, Jr., treasurer.

United Oils, Ltd., will drill on Legal Subdivision 1, Section 20, Township 18, if the Monarch Royalties test, now in the limestone and a half mile north of this location, is successful, officers announced last week.

Wildcat Will Produce

Weymarn Petroleum's wildcat on the Pincher Creek structure is capable of commercial production in its present condition, officials of the company announced last week. The crew is attempting to recover the flow of gas, finding reduction of a 400-foot column of oil and mud difficult because of continued seepage of oil to the top. If bailing now in progress is not successful in reducing the depth of oil and mud, the well will be closed to build up back pressure.

Modern sanitary quarters occupied by employes of Standard Oil Company of Venezuela.

Poison gas was encountered in a stray sand at 1063 feet at Moose Oils' No. 2 well on the Moose Dome, overcoming two of the drilling crew. The gas flow came up through 16-inch casing. The No. 1 well, closed for a considerable period, staged a show recently when valves were opened. Gas and oil blew high up the derrick. The well cannot be placed on production, as it freezes shortly after being opened up.

Caving trouble at Franco Oils' No. 1, at Cardston, has been overcome at 3600 feet. It was caused by a heavy gas flow encountered at that level. The hole is now in good shape and is ready to go an additional 2000 feet, if necessary, and to make any additional hole required to hit the Madison lime. The No. 2 well, on the Vera structure in Saskatchewan, has started new hole from 1600 feet.

The summary report of active Turner Valley wells follows: Brown Oil Corporation's No. 1, drilling at 4675 feet; No. 2, drilling at 4500 feet; No. 3, drilling at 770 feet; Command Oils, waiting casing at 810 feet; Commoil, drilling at 4450 feet; Davies Petroleums No. 1, drilling at 2600 feet; No. 2, drilling at 4793 feet; Firestone Petroleums, drilling at 3193 feet; Four Star Petroleums, drilling at 3475 feet; Globe Oil Company, cemented at 1450 feet; Granville Oil Company, drilling at 4760 feet; Home Oil Company, drilling at 650 feet; Mercury Oils No. 8, drilling at 4320 feet; Mercury Royalties, drilling at 4435 feet; Model-Spooner-Reward Royalties, drilling at 3000 feet; Monarch Royalties, drilling out plug at 6545 feet; National Petroleum Corporation's No. 1, drilling at 3175 feet; No. 2, drilling at 2650 feet; North American Petroleums, drilling at 600 feet; Phillips Petroleum Company, drilling at 3370 feet; Prairie Royalties, drilling at 4690 feet; Richland Oil Company's No. 1, repairing derrick at 3050 feet; No. 2, drilling at 4765 feet; No. 3, running casing at 5645 feet; Rich-Well Oil Company, drilling at 1130 feet; Royal Crest Petroleums, drilling at 3750 feet; Royal Canadian Oils, rigging rotary at 505 feet; Royalite Oil Company's Sterling-Pacific 5, drilling at 6552 feet; No. 6, drilling at 675 feet; Share Royalties, drilling 4920 feet; Sunburst Oils, drilling at 2620 feet; Sunset Oils, casing at 3044 feet; Three Point Petroleums, drilling at 2900 feet; West Flank Petroleums' No. 1, drilling at 2850 feet; No. 2, ready to spud.

FOR DIESEL "HOT SPOTS"

HOT SPOT NO. 1

Cylinder Liners

YOUR modern Diesel does its job. But don't forget... to do it, its cylinder walls and pistons must stand far greater heat and higher pressures than the simple gasoline or steam engines, of a few years back.

To keep abreast of this heat and pressure, modern metallurgy provides alloyed cast irons far stronger than the ordinary. For the cylinder liners shown above, Washington Iron Works, of Seattle, produces an iron with a tensile strength of 44,000 p.s.i., and a Brinell hardness of 213. This result they accomplish by adding to a properly balanced base mixture 1.50% Nickel and .030% Chromium.

HOT SPOT NO. 2

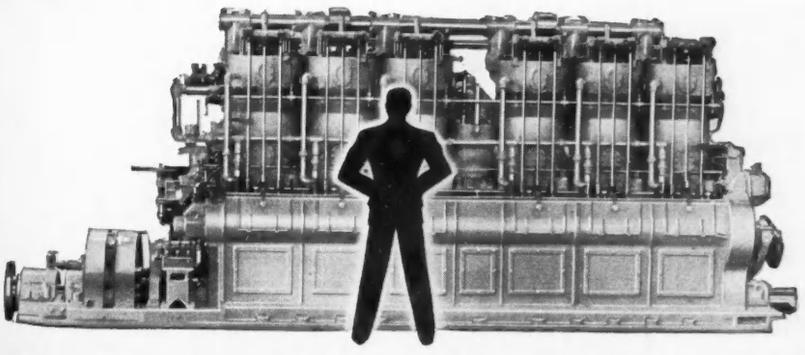
Pistons

THE piston being installed in this Washington marine Diesel often reaches temperatures of 660° to 1100° F. Wear resistance, the ability to hold for years its strength under this heat, is assured by the use of a similar Nickel-chromium iron.

Small amounts of Nickel also make cast irons *uniform*. The density and evenness of grain structure eliminates the "soft spots" so weakening in plain cast iron. With Nickel you get a smooth-sliding piston.

If you have a tough job, give it with confidence to the Washington Diesel. For helpful advice as to the exact alloy for your "hot spot" jobs, write the Inco engineers to-day.

NICKEL CAST IRONS



THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL ST., NEW YORK, N. Y.

CANADA YIELD UP

Production indicates big gain over 1936 output

If Canada continues to produce for the rest of 1937 the way it has produced thus far, an increase of 25 percent for the year's production over the total produced in 1936 will prove a conservative estimate.

During the first four months of the year the country has recovered 659,655 barrels of oil, which compares with 454,731 barrels produced during the corresponding period of 1936. The total yield for 1936 in Canada was 1,504,287 barrels, whereas the indicated yield for 1937 is in excess of 1,978,965 barrels. The actual yield for 1937 probably will exceed considerably 2,000,000 barrels as 25 wells are scheduled for completion in Turner Valley before the close of the year.

The Dominion Bureau of Statistics at Ottawa reports that the crude petroleum and natural gasoline production in Canada during April set a new high monthly record of 188,014 barrels. In March, 176,657 barrels were produced, while in April, 1936, the output was 107,748 barrels. Production during the first four months of 1937 totalled 659,655 barrels or 45.1 percent above the production in the corresponding period of 1936.

Alberta's output in April amounted to 172,608 barrels and consisted of 170,150 barrels from Turner Valley 1195 barrels from Red Coulee, and 1263 barrels from Wainwright.

Natural gas production in Canada during April amounted to 2,254,401,000 cubic feet as compared with 2,677,285,000 cubic feet in March and 2,297,181,000 cubic feet in April, 1936. During the first four months of the current year, 12,035,710,000 cubic feet were produced; in the corresponding period of 1936, the output was 12,646,781,000 cubic feet.

Export Outlook Better

[*Continued from page 19*]

tinue to run and in some instances operate on alcohol alone. This serves to furnish an outlet for the alcohol industry, which is said to be heavily subsidized by the government.

Germany Drilling Deep Tests

While some oil is produced in Germany, it is insufficient to meet the needs of the country. Deep tests are now being drilled which may lead to the production of oil. Formations have been encountered which are completely saturated, but the porosity is insufficient and the wells will be deepened in an effort to tap a source that will yield commercial production.

Although these German wells are to be drilled by thoroughly experienced operators, they are conducted somewhat in the nature of an experiment. Certain capitalists had large amounts to invest. The government is said to have forbidden the use of the money abroad, but was perfectly willing that it be used at home for the tests discussed. However, the operators were required to drill the wells with German labor and machinery manufactured at home.

The latter difficulty was finally surmounted by purchasing an interest in a steel plant, then designing the equipment to be manufactured. Despite the fact that this material was operated by men inexperienced in the oil business, progress was made by proceeding slowly under adequate supervision. For these reasons it appears unlikely that production, if found, will come into the market in large quantities for several years.

Russia

Little information is currently available on the condition of producing operations in Russia. However, it is asserted that new discoveries have been made, but that development has been hampered by inefficient operation and lack of coordinated effort.

Italy Less Concerned

While Italy is likewise in need of reserves at home, she appears less concerned about conditions than is France, possibly because of her position near the fields to the east. In addition to this source of supply, much oil is imported from the Gulf Coast area in the United States, and it is upon this supply that the refiners rely. In this program they are aided by the government, although subsidies are less important than efficiency in giving these plants the ability to compete with major company operations.

Rumania Is Key

The key to the French and Belgian situation is Rumania, upon which these nations have depended in the past for their supplies of crude to be processed in independent plants. The fact that this supply is now declining has placed these two nations in the position of finding other supplies.

The best sources reported that Rumanian crude was the security for the large credits extended by France since the war. The Rumanian government has a large royalty share of the oil, and it was this oil, shipped to France or to purchasers she designated, out of which these debts were to be paid. In some instances, it is said, this oil went to Belgium, and the cash payments were made to France, Rumania receiving credit on her debt for the payment.

Predicts 15 Percent Drop

However, in 1936, the country produced only about 65,000,000 barrels from 1755 wells, and despite continued drilling, it appears likely that production will drop at least 15 percent during this year. The total reserve is estimated to be only 450,000,000 barrels, slightly more than the State of Texas produced (430,000,000 barrels) during 1936.

Preliminary surveys indicate that there are large areas which may yet prove productive, but at present it seems unlikely that these will be developed because of the handicap presented by laws as amended last year. Although concessions are available, the government requires a large share in the royalty oil and extensive development.

After a discovery is made, the holder of the concession is permitted to retain only a portion of it, and the best part may be recovered by the government to be sold later. While the discoverer may repurchase this portion, he is faced with competition from Rumanian companies who are vastly favored, so that this program is discouraging and is more likely than not to end unprofitably even though oil in commercial quantities has been discovered.

Reserves Will Last 10 Years

No effective conservation program has been developed although there are comparatively few wells and more than

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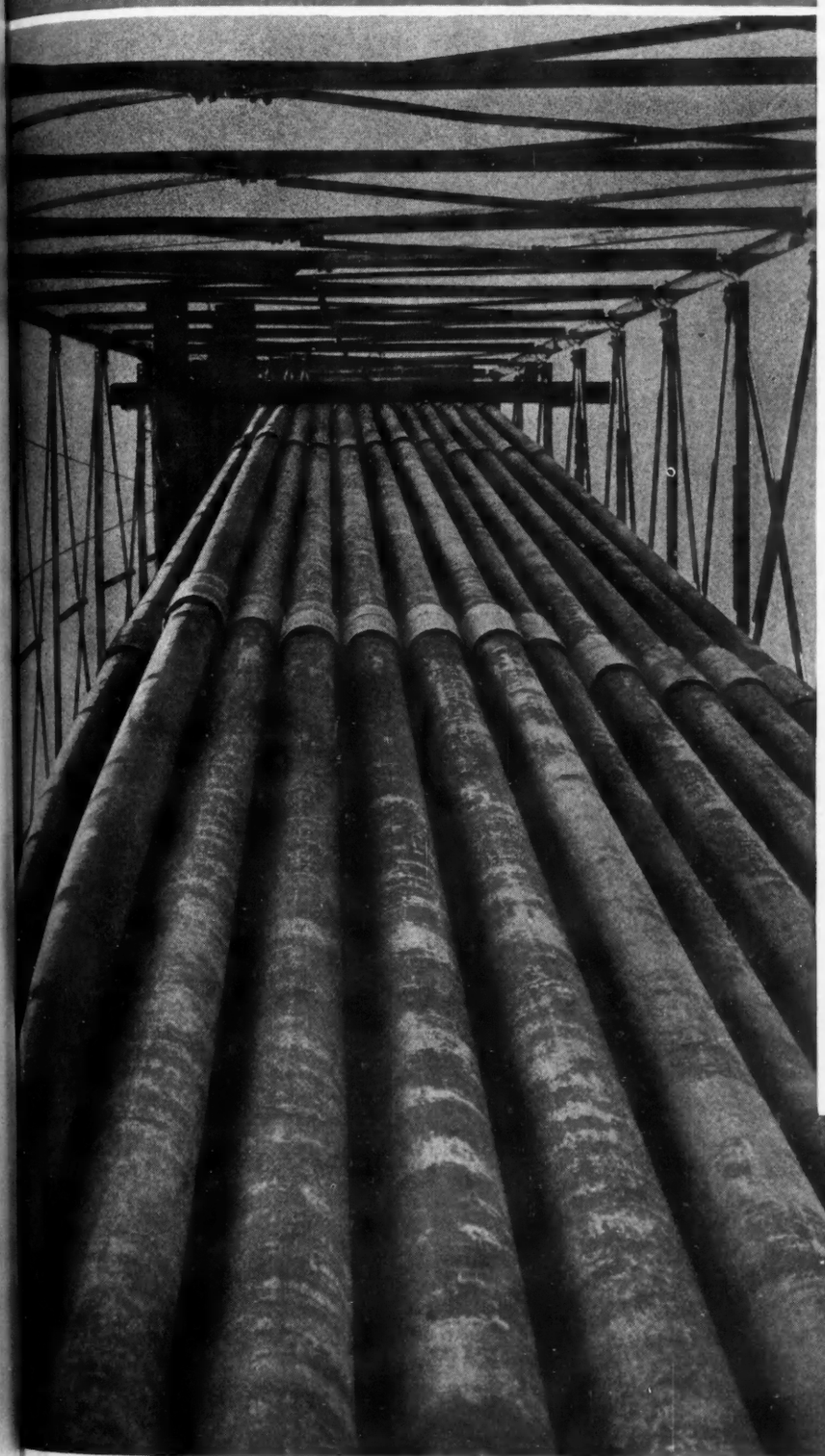

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two-thirds of these are in the hands of 15 companies. This has resulted in dissipation of the reserves without recovery from the sands of all the oil which might have been produced had more modern methods been used. Observers expect, however, that if further fields are discovered, development will proceed on a basis that is far more conservative. Under present methods of production, it appears that known reserves will be exhausted within 10 years.

Another difficulty which confronts producers is that of transportation. Because the government controls the railroads which derive large revenues from oil shipments, the construction of pipe lines is forbidden. This adds materially to costs although the oil can be moved on low cost boats upon reaching the water.

Production from some concessions must pay a royalty to the state which amounts to as much as 50 percent. This, likewise, proves a great obstacle to the development of new fields.

Refining and Marketing in Europe

Most of the countries of Europe depend upon major companies for the majority of the finished products they consume. In recent years a determined effort has been made to build up independent refining operations, most of which have been backed by the governments themselves.

These operations, however, have been for from sufficiently successful to permit them to supplant entirely the operations of the major companies. This failure has been due to three principal causes: (1) an inadequate supply of crude at prices which would permit competition with the major companies; (2) high taxes on gasoline; (3) a maximum price for gasoline fixed by the government.

In some cases the spread between the price of finished products at the independent plant and the price of finished products shipped from abroad is only one-half of one cent. Thus a slight increase in the price of crude eliminates all prospect of profit and the refiner cannot increase the price of his product without governmental sanction.

Taxes Burdensome

In France the refiner must pay the tax on all gasoline sold to distributors. Since the tax comprises 39 cents of the total wholesale price of 43 cents, refiners face serious losses in the event a distributor goes bankrupt and cannot pay. The gasoline retails for 55 cents per gallon in France.

Under provisions of a law passed some three years ago, the foreign competition from finished products was to be eliminated. The refiners were told that if they built plants in France, importation of finished products would be forbidden at the end of three years. The plants were constructed but refiners declare that the law has never been enforced, and they must still compete with finished products from abroad.

Outside of Rumania, most of the oil fields are in the hands of major companies which absorb the crude in their own refineries. Because sources of supply are remote, prices fluctuate on rumor, especially rumors emanating from the East Texas field.

Influence of Rumors

The Europeans, from experience gained during the days when large volumes of "hot" oil came out of this field, have learned to fear a break in the market which would result from a breakdown of production control in this field. Far more credence is given to rumors than in the United States, where purchasers are in direct communication with the fields by telephone and may verify reports immediately.

During the course of the congress a letter to the French Government was circulated among all the larger refiners in the country. This letter stated in substance that the writer had 10,000,000 barrels of East Texas crude to deliver, and intimated that it might be had below the posted price. Cargo prices became unstable and the message was brought to the attention of Railroad Commissioner Ernest Thompson.

Although well aware that no such amount of oil was to be had, Thompson cabled the American Petroleum Institute in New York, from which city the letter had come; another cable went to Commissioner C. V. Terrell, and a third to the Washington representative of the Independent Petroleum Association of America. The latter two reported at once that no such supply was held in independent hands so far as they could determine, but the most illuminating answer came from New York.

The Institute reported that after some investigation it had located the offerer, that he had no office, did business in his apartment, and that in spite of his representation that he had handled some "50,000,000 barrels of crude," the question was not worth further investigation.

The importance of quashing this rumor becomes apparent when it is disclosed that the most worried persons were Parisian representatives of two of the largest major companies operating there. They pointed out that this was only one of many such reports, and that upon receipt of each report there was a tendency on the part of the government to demand a lower price for gasoline based upon lower crude prices which these reports would seem to indicate existed.

Before the congress ended another letter was received from El Paso offering "a large quantity of East Texas crude oil for sale if the price is right . . . with state and federal tenders furnished . . . " this missive was turned over to Thompson who promised to investigate it upon his return to America.

Government Falls

Although France is most in need of crude, her current financial condition makes trading most difficult. As the world congress was concluded, the Blum government fell because of the drastic financial measures which the premier demanded. In effect, the bill he proposed would have given him complete monetary control. The bill was approved by the chamber of deputies, but the senate refused it, leaving Blum no course but to resign since he had committed his administration to this act.

Subsequently, because of the instability of the franc after a new government was formed, it was found necessary to close the Paris stock exchange until some sound course for finances had been plotted. Although Blum blamed speculators' raids for the weakness of the franc and the flight of capital, unbiased observers pointed out that had the government position been as strong as Blum contended, the raiders would have lost vast sums.

Tax Increase Opposed

The government was said to be faced with grave difficulties in obtaining cash in quantities sufficiently large to meet current payrolls, including that of the army, and various tax increases were being considered. Among these is an increase of the gasoline tax. This plan was opposed by oil companies who realized the impossibility of obtaining much higher prices for gasoline and passing on the tax, as well as by the public at large.

For these reasons sellers who have crude available demand cash payments for their products, fearing to extend credit in the face of an almost certain decline in the value of the French franc.

The demand for crude is confined largely to an oil that will produce large volumes of gasoline with an octane rating of 70 and above. European refiners listened attentively to reports that 100 octane gasoline was no longer an impossibility, although the process had not yet been developed to a point that would permit its commercial manufacture in large quantities.

While in most of the countries it is not against the law to add natural gasoline to the cargoes of crude imported, this treatment is forbidden in some countries, especially Italy. Revision of these regulations may reasonably be expected in the near future, which would make available some grades of oil which cannot meet tests required now.

Oil which will form a source of lubricants is also in great demand, although of course most purchasers would prefer a crude from which both gasoline and lubricating oil could be processed.

NEW FIELD LOOMS

Heavy showing of gas in Cuban wildcat

Compania Petrolera Degener de Cuba recently encountered a heavy showing of gas at 1145 feet in No. 2, a test being drilled northeast of Motembo Basin, north of Vesuvius field and south of the lime outcropping, a letter from Cuba states.

This is the well which found crude at 160 feet. (See The Oil Weekly of October 26, 1936.) Although casing is set at 1196 feet in No. 2, leaving 4 feet of open hole beneath it, the heavy gas is still in evidence, indicating it is coming from around 1200 feet, total depth, or lower, and not from a crevice.

The well is too far from either the Vesuvius area or Motembo proper to warrant opinion that the gas flow might be coming from either of these producing areas, and the Degener organization believes it has discovered another field for Cuba.

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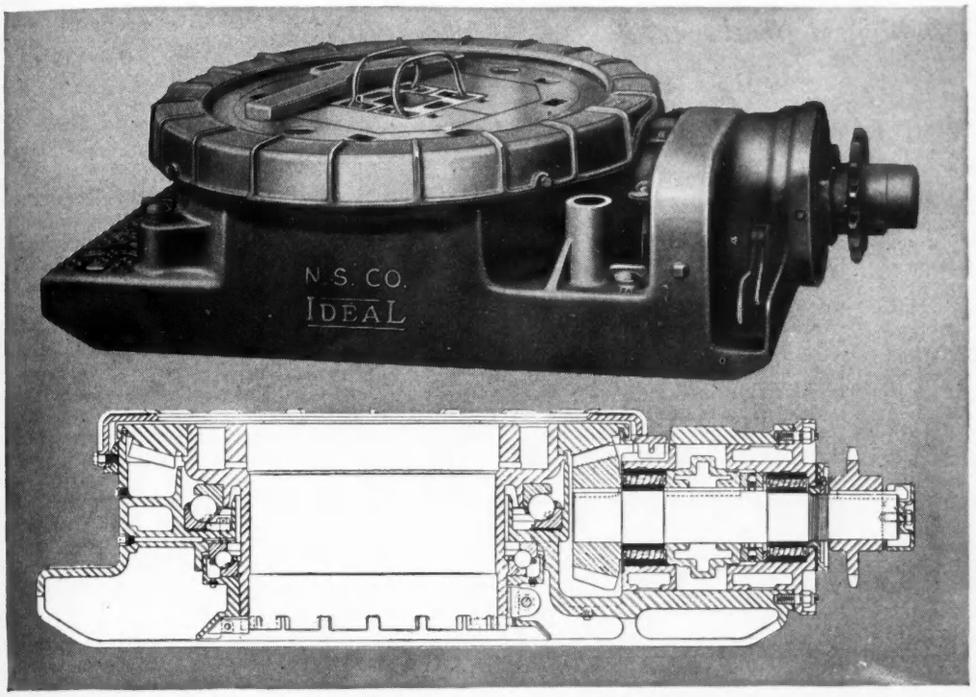

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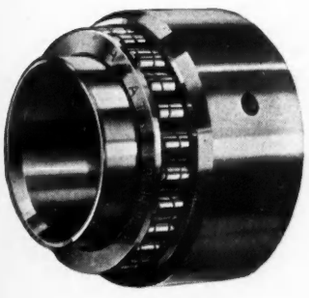

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OKLAHOMA FIELDS

North Wellston production extended southwest.

* * *

Jesse pool completion is largest producer.

* * *

Lucien outpost test showing for production.

Tulsa.—Proof of a southwest trend for the North Wellston pool of Lincoln County, testing of the largest producer yet had in the Jesse pool of Pontotoc County, and finding of commercial production in the second Dutcher sand in Okfuskee County were highlights of activity which brought this district out of the holiday slump experienced two weeks ago. Events in other parts of the district were not so good, but operators at important wildcat wells continued persistent efforts to bring them into production.

Southwest trend for the North Wellston pool of Lincoln County was proven last week when Sun Oil Company's Arinwine 2, NW SW SE 35-15n-2e, deepened from the Simpson to the Wilcox sand and came in making a steady flow of 125 barrels of oil per hour. It was forced to shut in for lack of tankage. The well had already established itself as a fairly good producer from the Simpson, but when drilled to the Wilcox sand at 5085 feet it jumped production from 42 to 125 barrels an hour.

The formation was topped at 5072 feet and at 5080 feet the hole filled 3800 feet with oil. Because the Wilcox sand in this area carries a heavy mixture of lime it can be acidized, and operators ran 4000 gallons into the hole. Following the treatment the well showed a net production of 330 barrels of oil in the first 5 hours through casing, with an average output of 40 barrels of oil an hour.

The new well proves up 80 acres held by Sun Oil Company in S½ SE 35-15n-2e, and 20 acres held by Deep Rock Oil Corporation to the west, which has staked location for Eakers 1, NEc SE SW 35-15n-2e, a due west offset. It also improves the looks of holdings of two other companies with acreage nearby, Summitt Drilling Company and Stanolind Oil & Gas Company.

Good Jesse Well

Largest producer yet to be had in the Jesse pool of Pontotoc County was brought in last week at Mid-Continent Petroleum Corporation's Statler 5, SW NE SW 2-1n-7e, which made an estimated flow of 2535 barrels of oil in 3 hours and 30 minutes, the flow being subject to correction as cable tools were being removed from the hole at the time. It also had an estimated 8,000,000 to 10,000,000 cubic feet of gas. Tubing will be run and a potential taken.

Statler 5 topped the first Bromide at 4515 feet and had the first oil one foot deeper. The second pay was encountered from 4522 to 4532 feet, the total depth, where the huge flow was had. Hourly gauges of the initial test show the well made 455 barrels of oil the first hour; 640 barrels the second hour; 780 the third, and 660 barrels the last 30 minutes.

Another test in Jesse was not so fortunate. It was Francis Oil & Gas Company's Provence 1, SW NW NW 2-1n-7e, which swabbed 18 barrels of oil in 24 hours while cleaning out. Top of the Gilcrease sand was found at 1865 feet and it drilled to 1930 feet, where testing will be continued.

In the Jesse-Muse area, Blackstock Oil Company's Thompson 2, SE NE NE 4-1n-7e, bailed down and filled 1500 feet with salt water. It was waiting on cement after plugging back to 4425 feet. Top of the first sand was found at 4585 feet and the total depth was 4600 feet.

The closely watched test 3½ miles west of Fitts, C. W. Roodhouse et al's Booth 1, SE NW SE 20-2n-6e, was attempting to make a producer in the Hunton lime. Plugged back to 4400 feet in the Sylvan shale, the well was acidized with 10,000 gallons and flowed 2 barrels of oil in 5 minutes through tubing. Opened and allowed to flow through casing, it made 5 to 10 barrels of oil gross, and was to be reacidized with 10,000 gallons. Top of the Bromide was had at 4821 feet and was drilled to 4966 feet where water was encountered.

In another part of the Jesse pool, Carter Oil Company was to begin completion operations at Nix 1, CWL SW NE 1-1n-7e, which flowed 502 barrels of oil net in 18 hours and was shut in for tanks. The well topped the Hunton lime at 4002 feet and went to 4020 feet where it was acidized with 2000 gallons. There was no water with the oil and the well was making about 1,000,000 cubic feet of gas. Nix 1 is ½ mile northeast of an old Hunton lime producer drilled in March of 1935 and which was completed for 65 barrels of oil after being acidized. It is still making 45 barrels of oil daily.

An important strike in Okfuskee County last week was discovery of production in the second Dutcher sand. It was Riverland Oil Company and Lease Investment Company's Bond-Knight 1, NE NW SE 10-13n-10e, which will be carried to the Wilcox sand. Top of the first Dutcher sand was missed entirely and the second member of the series was found at 2740 feet. Drilled to 2745 feet, the well flowed 100 barrels of oil in two days. Preliminary tests did not justify completion in the second Dutcher sand.

Carter Oil Company et al's Thompson 1, CSL NE NW 34-2n-9e, in the Centrahoma area of Coal County, pumped 47 barrels of oil in 18 hours and pumped off.

Carter Oil Company et al's Hamilton 1, CWL NE SW 33-4n-9e, was drilling below 6158 feet in Dolomite with nothing showing.

Norbla Oil Company's Kennedy 1, SEc NE 13-2n-5e, southeast of Fitzhugh in Pontotoc County, was at 1318 feet in the Siliceous lime with a hole full of water. Top of the formation had not been determined as yet.

Stanolind Oil & Gas Company and Amerada Petroleum Corporation's Billington 1, SW SE SW 32-9n-3e, near Marvin in Pottawatomie County, and which looked to be a pool opened several weeks ago, was plugging back to acidize the Simpson dolomite. The well was last reported preparing to swab and bail before running the acid. The well originally went to 5320 feet in the Wilcox sand but will plug back to 5230 feet.

Shell Petroleum Corporation was building rig for Means 1, SWc SE 32-9n-3e, east offset to Billington 1.

North Tussey production defined on southwest

Ardmore.—Apparent definition of the southwest edge of production in the North Tussy pool of Carter County; starting of another test in Frederick County and routine operations at other wildcat tests in southern Oklahoma were the only reports from this region last week.

The well which established the edge of the small but steady producing area in Carter County, the North Tussy pool, was Amos Drilling Company's McCrory 1, NE NW NW 5-1s-3w. It had drilled to 3371 feet and cemented pipe at 3250 feet when water came into the hole.

Plans for another test in the Tillman County area held by Indian Territory Illuminating Oil Company and Foster Minerals Corporation were brought to light last week with the recording of a royalty deed calling for a test in the near future on a block southwest of Frederick. The area under consideration is SE 36-2s-19w, and operations must be underway by August 15. The first well drilled by the two companies there, and the first deep producer for the county, continues to make about 60 barrels of oil. It is Hatler 1, CSW NE 32-2s-17w, which was plugged back and completed through perforated casing.

Excitement created over finding of

production in Helmerich & Payne's Graham 1, SWc NE 12-1n-5w, in the old Doyle area of Stephens County died down somewhat, with considerable argument over the horizon from which the well is producing, continuing to circulate. Most geologists contend it is the Dees sand, but because of a log showing 1172 feet of sands in the well, other ideas and may be correct. It is producing from a plug-back depth of 3807 feet.

In another part of the county, Carter Oil Company et al's Harley Community 1, CNE NE 24-2s-4w, in the Milroy area, was drilling at 7065 feet. The well has had stains of oil in cores. Best that can be hoped for at the test is that it can be completed at some depth higher in the hole, possibly higher than the company's Ruth Williams 1, in the old Fox field of Carter County.

One of the hardiest wells in the southern part of the state continued testing. It is Sinclair Prairie Oil Company's Stockton 1, SEc SW 26-6s-2w, in the Oswalt area of Love County. It is believed the well will be completed for about 25 barrels of oil daily. Operators were attempting to build up sufficient pressure to cause the well to flow naturally, but little success has been noted. One of the oldest wildcat operations in the state, it was originally drilled to 8000 feet, but plugged back to 6920 feet.

OKLAHOMA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CLEVELAND COUNTY—		
Anderson-Prichard, State 3, sw nw se 16-10n-2w	24,108	7285
Phillips et al, State 1, sw se se 16-10n-2w	24,108	7252
COMANCHE COUNTY—		
Guy Anderson, Price 3, sw ne ne 30-2n-9w	25	2031
S. B. Roberson et al, Truitt 1, nw se se 26-2n-11w	4	229
COTTON COUNTY—		
Shasta Oil Co., School land 5, nw se ne 36-1s-10w	*	2300
CREEK COUNTY—		
Deep Rock et al, Kimbley 1, nw ne ne 15-14n-10e	2	3165
R. K. Huey, Yarhola 7, nw ne se 34-15n-8e	22	2540
Sinclair Prairie, Tucker 8, sw c se 3-17n-7e	17	2668
Pure Oil Co., Richards 2, ne se sw 4-17n-7e	17	2637
Sinclair Prairie, Jones 8, nw se nw 4-17n-7e	10	2633
Jones 11, nw ne nw 4-17n-7e	3	2535
Jones 12, c w l se nw 4-17n-7e	274	2691
L. B. Jackson, Nolan 5, nw nw sw ne 2-17n-8e	8	2732
Big Four, Cubby 2, nw nw ne 30-17n-8e	¶35	1064
Sinclair Prairie, Turner 2, ne se sw 3-17w-9e	5	2093
Central Commercial, Hay 3, sw nw sw 10-17n-10e	*	4282
C. O. Buckles, Frailey 8, se sw se 22-18n-8e	*	1340
L. B. Jackson, Bear 8, nec se 35-18n-8e	5	1632
D. W. Fanchot, Franklin 1, se nw se 20-18n-9e	60	3015
Johnson O. R Co., Flinchin 7, se ne sw 11-19n-9e	*	2172
Swift et al, Hayden 1, ne sw sw 12-19n-9e	60	1216
Brady et al, Duncan 3, sw ne ne 19-19n-9e	75	2450
Bryan Pet. Co., McClain 3, ne se ne nw 22-19n-9e	7	2285
GARVIN COUNTY—		
Cox & Hamon, Norton 1, sw nw ne 32-1n-3w	*	2710
Wrightsmith, Yates 2, sec nw 33-1n-3w	¶5	1738
HUGHES COUNTY—		
Sinclair Prairie, Harjo 1-A, ne sw se 11-7n-8e	*	1860
Mid-West, Lucan 1, c se nw 13-9n-9e	*	3389
JEFFERSON COUNTY—		
Bridwell Oil Co., Wohlengemuth 14	45	1520
KAY COUNTY—		
Higdon et al, Neiman 1, ne nw ne 9-26n-3e	¶50	519
Prunty et al, Westgate 1-A, se nw se 12-26n-2w	*	3650
KIOWA COUNTY—		
McWhirter et al, Padgitt 1, ne nw se 3-5n-17w	*	610
LINCOLN COUNTY—		
Coline Oil Co., Davenport 1, se sw nw 1-14n-3e	142	4300
Exchange Drilling Co., Dowell 1, se se nw 10-14n-6e	48	3065
Sinclair Prairie, Buckles 1, nw nw se 15-14n-6e	20	2978
Gulf, Pecks 1, nw nw sw 36-15n-2e	40	5195
Amerada et al, Fox 1, sw se nw 21-17n-3e	32	4637
Mullendore et al, Kellar 1, ne ne nw 28-17n-7e	*	4669
LOGAN COUNTY—		
Mid-Continent, Dodson 1, se se se 11-17n-1w	314	5092
Champlin, Ofiefer 4, sw ne nw 4-19n-2w	7885	5073
NOBLE COUNTY—		
Stanolind et al, Henn 1, sec ne 32-20n-2w	70	5140
F. M. Dye et al, Dalzett 1, se c sw 8-22n-1w	*	5254
Continental, Conway 2, ne ne sw 21-23n-2w	1500	4329
Phillips & Shell, Hackett 3, nw se se 21-23n-2w	1838	4356
McCaughtry 10, nw se ne 21-23n-2w	3560	4323
McCaughtry 12, nw nw ne 21-23n-2w	2204	4312
Tide Water, Hackett 6, nw se se 21-23n-2w	3795	4332
Shaffer 2, nw ne sw 21-23n-2w	2983	4339
Shaffer 3, se ne sw 21-23n-2w	3854	4334
OKFUSKEE COUNTY—		
Sinclair Prairie, Ohee 3, se sw nw 19-10w-9e	100	1889
Palmer 6, ne c nw 19-10n-9e	230	1817
Snyder et al, Wirid 10, c sl sw ne 35-11w-9e	8	1492
OKLAHOMA COUNTY—		
Sunray, Dickson 1, nwc 17-11n-1e	*	6525
Olson Drilling Co., Jones 1, c s l ne se sw 15-12n-3w	583	6461
Anderson & Kerr, Fee 1, c nw se 27-12n-3w	5300	6551
Larkins et al, Military 1, nec sw 34-12n-3w	268	6516
A. C. Harkins, Lucas 2, ne nw sw 36-12n-3w	763	6375
Phillips, Traders 6, nw sw sw 36-12n-3w	480	6302
Ohio Oil Co., Hathaway 4, nw c nw 6-13n-3w	1777	6600
Ohio Oil Co., McMillian 5, ne sw sw 31-14n-3w	892	6693
OKMULGEE COUNTY—		
Rebold et al, Harine 3-A, ne ne sw nw 11-11n-13e	*	1344
Klingensmith, Farr 17, c e 1 w½ ne nw 35-16n-11e	60	2365
Downing, Colbert 9-A, c sw nw 1-15n-14e	10	1376
Stekoll et al, Milker 1-A, cel ne nw 17-14n-13e	10	1869
OSAGE COUNTY—		
Skmons et al, 18, nw sw nw 7-21n-9e	5	533
Ohio Oil Co., 8, ne se sw 36-22n-8e	3	580
Midco Oil 1, se se nw 22-23n-6e	*	2992
Pure Oil Co., 173, nw sw ne 5-23n-8e	87	1957
Barnsdall, 22, nw se se 18-23n-12e	20	1637
Lewis et al, Claremore 10, sw nw se 17-24n-7e	273	2631
Peters et al, 16, nw se se 24-24n-7e	15	716
Lewis Prod. Co., 4, sw nw ne 33-24n-7e	233	2634
5, ne ne ne 33-24n-7e	162	2635
Gault Brown et al, 3, n sw ne 14-24n-8e	*	1714
North Avant Unit, 27, sw sw ne 31-24n-12e	50	1750
48, nw se ne 31-24n-12e	1	1738
49, se se ne 31-24n-12e	*	1773
19, nw ne se 31-24n-12e	*	1778
Coralena Oil Co., 12, se ne sw 15-		
Codalena Oil Co., 12, se ne sw 15-25n-6e	15	2821
Sinclair Prairie, 7, nw se ne 16-25n-6e	115	2852
6, se ne ne 21-25n-6e	140	2738
W. C. Norris et al, 8, c s½ se 24-25n-8e	1500	1800
Link Oil Co., 20, nw ne se nw 34-25n-9e	22	1748
I. T. I. O., 5, sw se ne 27-25n-11e	¶¼	1777
Barnsdall, 12, ne sw sw nw 16-25n-11e	50	1733
Phillips, 47, se se nw sw 15-25n-12e	*	1668
61, se se ne 21-25n-12e	*	1525
19-B, ne sw se 21-25n-12e	*	1009
J. H. Alexander 2, nw nw sw 30-25n-12e	*	1633
Magnolia, 9, nw sw nw 11-26n-6e	52	2865
Bay Oil Co., 3, nw cse 14-26n-6e	*	2954
Buffalo Oil, 54, se ne ne 20-26e-12e	5	1337
Phillips, 6, nw ne nw 36-27n-5e	*	2996
Zelsman 2, sw nw sw 26-27w-11e	15	1020
PAWNEE COUNTY—		
J. V. Scholtz, Dunn 6, nw ne se 10-20n-8e	¶1	1668
Roy Epess, Smelser 2, nw ne nw 35-20n-9e	4	2044
PONTOTOC COUNTY—		
Delaney et al, Smith 4, swc 25-2n-6e	2353	3712
E. H. Moore, Akers 16, nw sw ne 36-2n-6e	3428	3895
J. E. Crosbie, Burris 2-C, sec nw 27-2n-7e	163	2535
Magnolia, Simpson 1, sw ne ne 29-2n-7e	298	2640
Blackwell, Mount 1, swc nw 13-4n-6e	20	1560
Mid-Continent, Schaupp 1, sw nw sw 24-5n-6e	*	3185
Mary F Oil Co., Jiller 2, sw sw nw 15-5n-8e	*	1080
Larson et al, Robertson 3, nw sw sw 23-5n-9e	2	759
POTTAWATOMIE COUNTY—		
Mid-Continent, Bettis 1, nw sw se 17-7n-4e	*	4252
Phillips, James 1, nw se sw 17-7n-4e	6	4102
SEMINOLE COUNTY—		
W. C. McBride, Swan 1, se se nw 24-5n-5e	133	2668
Al Spears, Keaton 1, nwc 6-5n-8e	*	3129
Roodhouse, Stewart 1, swc 14-6n-6e	278	2325
W. B. Pine, Williams 2, ne ne ne 22-6n-6e	65	2339
Williams 3, sw ne ne 22-6n-6e	100	2341
P. Fraugh, Williams 2, nw se ne 22-6n-6e	281	2352
P. Traugh, Damerson 1, nwc sw 23-6n-6e	*	2382
Superior, Ingram 1-A, nwc 1-9n-5e	90	4280
Amerada, Noble 2, swc se 25-10n-7e	305	3600
McLaron 2, ne nw ne 36-10n-7e	468	3622
TILLMAN COUNTY—		
Shirley Clumm et al, Maricle 1, nwc se 16-4s-14w	*	2775
TULSA COUNTY—		
Swigt Bros., Bridges 1-A, csl s½ nw 14-19n-10e	5	825
Burton Holmes et al, Graves 2, se nw se 30-19n-10e	5	2258
Johnson O. R. Co., Bailer 4, nec sw 31-19n-10e	157	2282

*Failures; †Junked; ¶Million cu. ft. gas.

Lucien southwest outpost showing for production

Oklahoma City.—Careful testing of the farthest southwest test in the Lucien district of Logan County was one of the chief items of interest reported from this area last week. Operators were busy completing the latest producer in the Moore pool of Cleveland County, and added play was looked for along the east side of the Edmond pool with the partial completion of another well there. Two important wildcat tests were abandoned.

Cautious headway was being made at Mid-Continent Petroleum Corporation's Bulling 1, NEc 5-19n-2w, most southwesterly test in the Lucien district of Logan County, as the hole was loaded with water to control high gas pressure showing in the test. It showed 3700 feet of oil along with the 1200 feet of water

run into the hole after the first Wilcox sand was had from 4897 to 4929 feet. The pressure began showing shortly after the first Wilcox sand had been found between 4887 and 4900 feet. It appears the well will extend the Logan County side of the pool.

Sinclair Prairie Oil Company was connecting up at Franklin 3, NE NW SE 21-10n-2w, latest producer in the Moore pool of Cleveland County, estimated as a 10,000-barrel well. Early last week, the well bailed down to 4200 feet and while cleaning out made an estimated 15,000 barrels of oil and about 60,000,000 cubic feet of gas. It had the Wilcox sand from 7216 to 1265 feet. The company's Franklin 4, NEc SE 21-10n-2w, topped the Simpson at 6921 feet and was drilling at 7013 feet, still in the formation.

Lower in the pool, Gulf Oil Corporation's James 3, NE NW SW 27-10n-2w, was shot with 50 quarts between 7177 and 7194 feet and was cleaning out. Top of the Wilcox sand was found at 7280 feet and it was at 7291 feet. Two weeks ago the well flowed 679 barrels of oil in eight hours after acidizing at the total depth. Further tests are planned.

Ohio Oil Company's Messer 3, SW NW SW 32-14n-3w, east of the fault in the Edmond pool of Oklahoma County, gave that area a boost last week and apparently assures more activity there, as it made 739 barrels of oil in 15 hours following a shot. The shot was set off between 6678 and 6710 feet in the Wilcox sand. Operators are confident the test will make around 150 barrels of oil an hour after cleaning out. Total depth was 6725 feet.

Two Wildcats Quit

Two of the most closely watched wildcat tests in this sector of the state quit last week. First was Olson Drilling Company et al's Acre 1, CSW NE 14-24n-11w, which had a drilling record stretching back over several years. Recently, in early April of this year, operations were renewed and the well plugged back to 6500 feet. Standard tools were rigged and bailing and swabbing started. Repeated mechanical difficulties finally decided operators to abandon the hole at the old total depth of 7332 feet. The well was near McWillie in Alfalfa County.

Other major disappointment was Ohio Oil Company's State 1, SWc 13-23n-3w, which oil men had hoped would extend the Billings pool over into Garfield County. After finding water in the Wilcox sand, it plugged back and perforated casing in an attempt to make a producer, but to no avail. It abandoned at 5200 feet.

Texas Underproduces

Production reports compiled by the Texas Railroad Commission show May production of 44,185,400 barrels. The monthly statistical review was the first prepared since this duty was taken over by the Engineering Division of the Texas Railroad Commission directed by Production Chief V. E. Cottingham.

A noteworthy fact was that reported production amounting to 44,122,706 barrels exceeded the amount upon which purchasers and producers paid the state tax for the same period.

KANSAS FIELDS

Bemis pool extensions increase field work.

* * *

Another small pool opened in Barton County.

* * *

New wildcat work spread over several counties.

Wichita.—Another extension, its second in two weeks, has shoved the Bemis pool, Ellis County, to the forefront in Western Kansas. C. H. Lebow et al found Siliceous lime production three locations east of the former limit in that direction. Previously production had been enlarged by a quarter-mile extension to the southwest. These completions have brought offset drilling as well as a location still farther to the northeast.

Other highlights for the week from Western Kansas were extensions for the Westhusin pool, Brooks County, Welch pool, Rice County, Bloomer pool, Ellsworth County and indications of an extension of the Chase pool, Rice County.

The two extensions give the Bemis pool 58 producers. It has many edge locations to be drilled and structural indications are that it will be enlarged beyond present limits. The field draws production from the Siliceous lime, most prolific of the producing formations in Western Kansas.

The latest Bemis extension was C. H. Lebow et al's Richmond 1, SWc SE 15-11s-17w. It pumped 80 barrels of oil an hour from the Siliceous lime at 3444 feet and field men estimate it will be completed for around 2000 barrels of oil. It found the top of the formation at 3440 feet. Operators immediately made location for Richmond 2, SE SW SE 15-11s-17w.

Three new tests have been forced by the new producer. They are Empire Oil & Gas Company's Johansen 1, NWc NE 22-11s-17w; Ryan Consolidated Oil Company's Bemis 5-A, NEc NW 22-11s-17w and Margay Oil Company's Bemis 7-B, SEc SW 15-11s-17w, directly west of the new well.

Empire Oil & Refining Company also started a test at NEc 14-11s-17w, a mile and a quarter northeast of Bemis pool production. It is one mile west of two producers at the west edge of the Cress pool, also in Ellis County.

The southwest trend of the field is being shoved ahead following completion of Twin Drilling Company's Madden Estate, SWc NE 29-11s-17w, brought in two weeks ago, the latest extension well in that direction. It produced its first oil on a swabbing test at 3548 feet in the Siliceous lime. The next well to receive attention in that sector of the pool is York State Oil Company's Bemis 1, NEc SW 28-11s-17w, ½-mile east and one location south of Madden Estate 1.

Wichita.—A third extension for the Bemis pool of Ellis County was made July 8 at York State Oil Company's Bemis 1, NEc SW 28-11a-17w. Siliceous lime production was found from 3478½ to 3480 feet, through a saturated core. The test is ½ mile south of previous field limits and ½ mile east of Twin Drilling Company's Madden Estate 1, an extension of two weeks ago.

The potential for C. H. Lebow et al's Richmond 1, northeast extension well, was 2873 barrels, based on a 6-hour test made July 8.

A northeast extension of the small Westhusin pool of Rooks County in the north-central portion of the state was reported. The well was John H. Leavell et al's Baxa 1, SWc NW 12-9s-17w, which made 50 barrels of oil an hour on preliminary tests following acidization with 3000 gallons. It first began filling with oil from between 3146 and 3255 feet in the Kansas City lime, filling 2650 feet in 18 hours. It was swabbed before being acidized. A potential test was being started.

Long, Obins & Noble's Hubenett 1, SW NW SW 23-20s-6w, north extension well for the Welch pool of Rice County, pumped 360 barrels of oil in 20 hours and started on the potential test. The well did not pump off and was making flows every two or three minutes through the gas trap.

Mid-Continent Petroleum Corporation's Hubenett 1, NW SW SW 22-20s-6w, west offset to the new producer, set 12-inch casing at 234 feet and was drilling at 1990 feet.

Possible east extension of the Chase pool is seen at Comanche Oil Company's Emil 1, SWc SE 15-19s-9w, one section east of the northern end of the pool. The well made 666 barrels of oil in 24 hours following acidization with 500 gallons. Eight barrels of water came in with the oil. It was producing from the Kansas City lime at 2947 feet, topped at 2876 feet.

Atlantic Refining Company et al's

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Runyon 1, SW SW SE 11-27s-13w, in Pratt County, was to drill ahead after failing to find production in the Kansas City lime at 3931½ feet. Casing was set in the formation two weeks ago, but when perforated did not get production.

Another extension of the Bloomer pool into Ellsworth County was had last week at Yoches et al's Patzner 1, SW SE NW 30-17s-10w, which had a hole full of oil in 5½ hours. Production was coming from the Siliceous lime at 3289 feet, topped at 3287 feet. It filled 2400 feet with oil in two hours, and was reported running level with wells in the Bloomer pool itself.

Barton County may have a new and rather small pool with the finding of production at S. E. Bailey et al's Hammeke 1, NEc SW 12-18s-12w, east of Claflin. Unusual, in that it is surrounded by dry holes, the well had a good showing of oil in the Siliceous lime at 3427 feet, after having been dry at 2190 feet. Nearest production is in the small Feist pool four miles southeast. It was reported running 13 feet higher than a dry hole in Section 13-18s-12w.

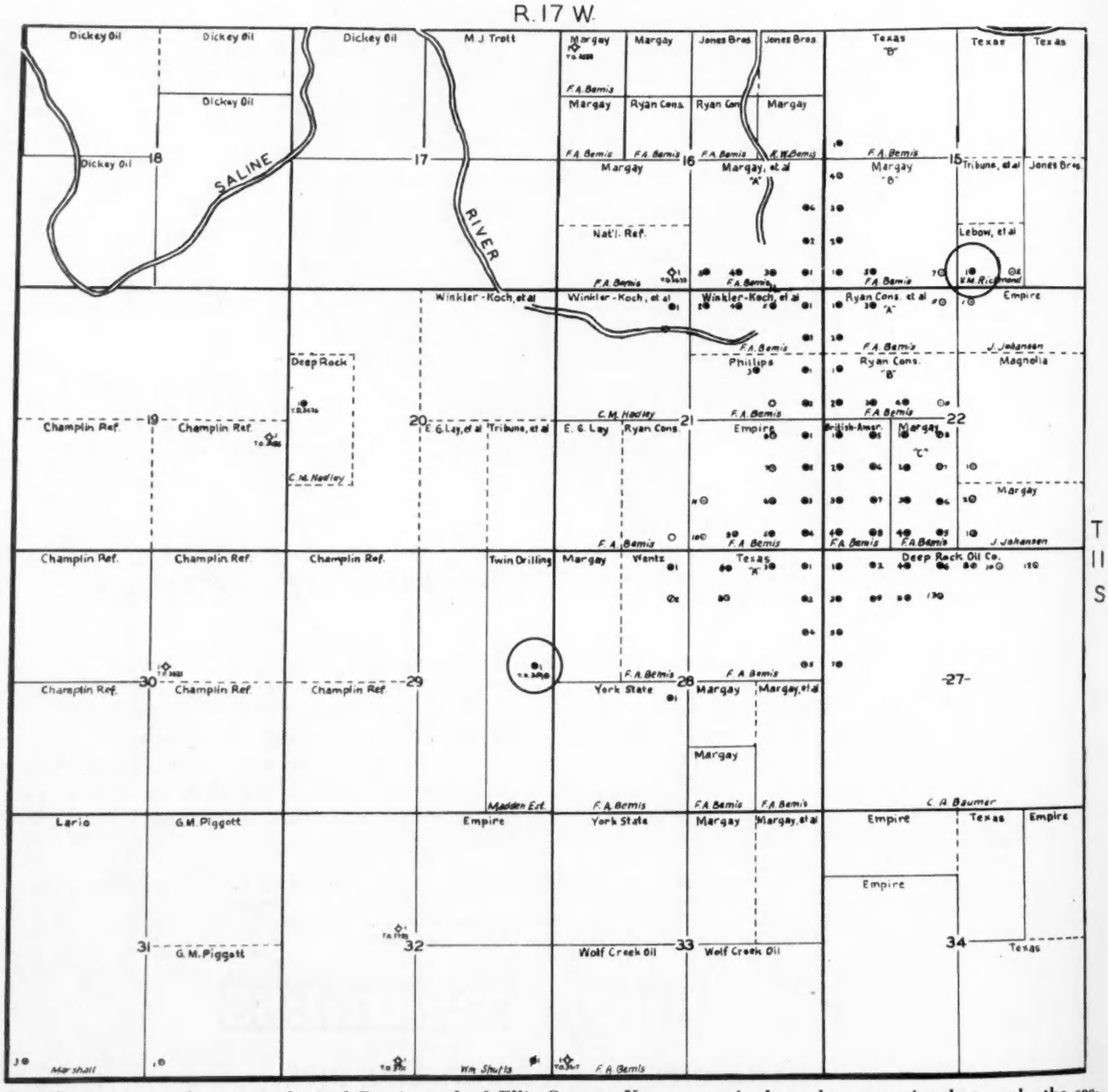
Pryor & Lockhart et al's Gant 1, CSE 7-31s-13w, which opened the third oil pool for Barber County two weeks ago, was completed for a potential of 1351 barrels of oil from the Viola lime at 4338 feet.

Several promising wells were reported from various other parts of the state. Near Sedan in Chautauqua County, Skiles et al's Foster 1, SWc 6-33s-12e, pumped 13 barrels of oil and pumped off. The well originally filled 800 feet with oil. It was to be acidized.

Southwest of Bentley in Sedgwick County, a rank wildcat had a small show in the Viola lime. It was Ryan Consolidated Corporation et al's Williams 1, SWc SE 17-25s-2w. The test went into the formation at 3911 feet for the show but passed it up and was drilling below 3938 feet in the Simpson sand with nothing showing.

The Texas Company was acidizing at Hoffman 1, NWc 6-16s-13w, first well to extend production south from the Trapp pool of Russell County into Barton County. Producing from the Siliceous lime at 3287 feet, the well pumped 537 barrels of oil in 12 hours.

Hays & Sackrider's Boxberger 1, SWc SE 26-14s-14w, one section south of a dry hole in the Gurney pool of Russell County, drilled to 3010 feet in the Oswald lime and made 1103 barrels



Rapidly growing and as yet unlimited Bemis pool of Ellis County, Kansas, received another extension last week, the second in about 15 days. Latest is C. H. Lebow et al's Richmond 1, SWc SE 15-11s-17w, which pushes production three locations east at the northern end of the pool. Week before last it was Twin Drilling Company's Madden Estate 1, SEc NE 29-11s-17w, a southwest extension, tending to link the Bemis pool with the new Marshall pool. Both were producers from the Siliceous lime.

of oil during the first day, following acidization. The dry hole was Aylward et al's Jones 1, SEc NW 23-14s-13w, which was abandoned at 3230 feet in the Siliceous lime.

Acid Treat Helps

In the Coralena pool of Russell County, Coralena Oil Company's Sellens 3, NEc NW 17-15s-13w, acidized at 3206 feet and pumped 676 barrels of oil in 12 hours. The well made a very small show when first brought in. To the northwest, Carter Oil Company's Josephine 1, SEc 7-15s-13w, pumped 415 barrels of oil in 12 hours from the Kansas City lime at 2980 feet.

Tubing was to be run and a pumping test started at Carter Oil Company's Staab 4, SW SE NW 11-12s-18w, in the Walters pool of Ellis County. The well had 2400 feet of oil in the hole coming from 3656 feet in the Siliceous lime. In the same section, Phillips Petroleum Company's Staab 2, acidized at 3641 feet and during a 16-hour pumping test made 775 barrels of oil.

New wildcat operations are spread over several counties

Wichita.—Kansas wildcat operators strung along with those in Oklahoma last week, making seven locations for new tests, but reporting only two renewals.

First of the new starts was in Chase County, just across the line and east of production in the Pixlee pool of Greenwood County. It was California-Illinois-Kansas Oil Company's Hughes 1, SW NW SE 13-22s-9e, which was rigging up machine. Cowley County also had a start, Lewis Production Company's Feaster 1, SE NW SW 36-32s-5e, which was moving in tools. It is one section west of Werner gas pool.

Ellis County Leads

Ellis County was on top with three new tests. Western Kansas Oil & Refining Corporation and Aylward Production Company's Schmeidler 1, NWc 22-12s-17w, east of Shutts pool, was a rig. C. E. W. Skiles et al's Jensen 1, SW SE NE 26-12s-18w, southwest of the same pool, was rigging up. Equidistant between Fairport and Gorham pools of Russell County, but in Ellis County, on the line, L. M. Reynolds et al's Polycn 1, SEc NE 24-13s-16w, was rigging up cable tools.

A renewal for Marion County was Western Kansas Oil & Refining Company's Suderman 1, SE SW NW 22-20s-2e, also rigging up cable tools. It is due south of Hillsboro.

Southeast of Hickok gas pool in Grant County, Kuhn Brother's Alderman 1, CSW 18-29s-35w, was drilling ahead at 918 feet. In Harvey County, several miles west of Burrton-Haury pool of Reno and Harvey counties, E. I. Shaffer et al's Epp 1, SEc SW 15-23s-3w, was drilling at 260 feet.

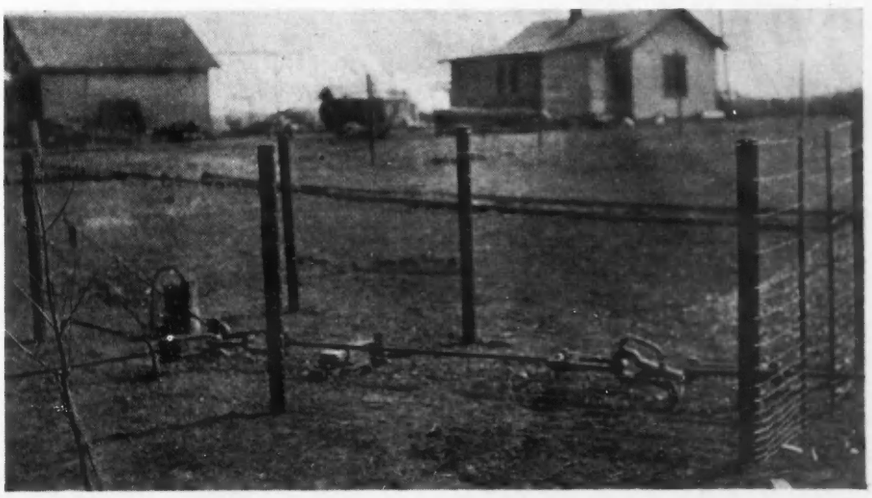
E. H. Moore, Inc.'s Waco 1, SWc NW 29-29s-1e, northeast of Peck in Sedgwich County, and the second venture in Kansas for the veteran operator, was waiting on cement after setting 12½-inch casing at 219 feet.

KANSAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BARBER COUNTY—		
Barbara O&G Co., Root 1, c w½ nw 14-33s-13w	¶5	4973
BARTON COUNTY—		
Polk et al, Meyers 1, nwc se 16-16s-12w	342	3353
Continental, Ainsworth 2-A, ne se ne 33-16s-13w	1845	3378
Gulf, Axman 1, nwc se 23-17s-15w	*	3589
Magnolia, Roetzell 8, sw nw se 24-20s-11w	2720	3252
BUTLER COUNTY—		
Roth et al, King 2, c s l ne sw 17-24s-4e	*	2520
National, Sutter 1-F, se c ne 13-28s-6e	*	3207
Sinclair Prairie, Sutter 1, swc nw 18-28s-7e	*	2723
Westgate et al, Doornboss 1, nw c sw 18-28s-7e	*	2754
COWLEY COUNTY—		
Lloyd et al, Carson 3, sw nw se 33-31s-3e	2615	3264
McCoy et al, Anderson 1, se nw nw 34-34s-6e	*	3055
ELLIS COUNTY—		
Empire, Bemis 6, nw se se 21-11s-17w	1708	3376
Deep Rock, Baumer 6, ne c nw 27-11s-17w	2875	3491
Beardmore et al, Weiland 6, sw ne se 36-12s-16w	25	3250
ELLSWORTH COUNTY—		
Continental et al, Jensen 10-B, sw ne sw 34-17n-8w	607	3253
Gulf, Grizzell 7, se nw nw 31-17s-10w	2188	3264
GRANT COUNTY—		
Columbian, Johnson 1, c sw 11-29s-36w	¶15	2575
GREENWOOD COUNTY—		
Davisson, Evans 1, se nw nw 7-22s-10e	200	2415
Phillips, Argard 7-A, c se nw 14-24s-9e	15	2173
Ohio, Armstrong 1, nw ne ne 16-24s-10e	*	2767
HARVEY COUNTY—		
Olson, Nelson 4, sw se nw 30-23s-3w	801	3370
McPHERSON COUNTY—		
Johnson, Good 2, sw se nw 13-19s-3w	100	2350
Continental, Kindblade 3, se c sw 20-21s-1w	682	3326
PAWNEE COUNTY—		
Simpson et al, Hewson 1, se c sw 13-21s-17w	*	3884
RENO COUNTY—		
Sinclair Prairie, Showalter 2, ne c se 8-24s-4w	300	3382
Kaufman 3, nw se sw 18-24s-4w	820	3389
Carter, Hogan 5, nw ne sw 19-24s-4w	400	3390
National, Tucker 6, sw c ne 19-24s-4w	1570	3387
Shell, Whipple 9, sw c ne 15-26s-9w	2210	4142
ROOKS COUNTY—		
Basin Oil Co., Bana 1, ne c 23-9s-17w	*	3630
Bronson et al, Casey 1, se se ne 22-9s-16w	*	3712
RICE COUNTY—		
Continental, Nickel 4, sw ne sw 13-18s-8w	1330	3225
Feuller 2-A, swc ne 12-18s-8w	*	3275
Bell Oil Co. et al, Wilkins 1, nw c ne 23-21s-9w	*	3687
Atlantic, Mills 4, ne sw nw 8-21s-7w	*	110
Batton 4-B, ne se ne 7-21s-7w	*	493
Hughes 3-B, nw se se 6-21s-7w	422	3334
Barnsdall, Hathaway 4, ne ne ne 33-19s-10w	1920	3286
Transwestern, Strumps 3, nw ne sw 4-18s-10w	*	3297
Ohio, Proffitt 10, nw ne nw 5-20s-9w	295	3242
Stanolind, Hathaway 1, nw c sw 33-19s-10w	890	3310
RUSH COUNTY—		
Greenwalt, Westgate 1, nw c ne 19-19s-16w	*	4017
RUSSELL COUNTY—		
Gulf, Mellie 1, se c 25-15s-14w	1650	3300
Empire, Bender 3-A, ne c nw 25-15s-14w	1890	3333
Gulf, Michaelis 7, se ne sw 32-15s-13w	1856	3279
Michaelis 6, se nw sw 32-15s-13w	1800	3354
W. I. Southern, Michaelis 9, sw nw nw 31-15s-13w	2794	3283
Empire, Helad 1, sw nw sw 10-15s-13w	*	3341
Skelly, Erlich 3, se sw ne 25-19s 15w	1183	3205
Mays et al, Barberger 1, sw c sel 26-19s-14w	1130	3159
Aylward et al, Jones 1, se se nw 22-14s-13w	*	3220
SUMNER COUNTY—		
Stelbar, Erker 17, ne sw ne sw 33-31s-1w	1360	3671
Climac Oil, Proud 1, sw se se 33-30s-1w	*	4102
STAFFORD COUNTY—		
Empire et al, Stinatze 1, nw c sw 15-25s-14w	1090	3809
Atlantic, Katchelman 1, se nw nw 13-25s-14w	*	4340
Empire, Benton 2, sw c 23-24s-13w	*	4160
Stanolind et al, Allen 2, ne c se 31-22s-11w	1312	3580
TREGO COUNTY—		
Watchorn et al, Wilson 1, ne nw nw 22-11s-23w	400	3500
WOODSON COUNTY—		
Henderson Oil Co., Voshtrez 4, nw ne se 23-23s-14e	30	1618
Nye & Kilby, Bowles 2, sw se nw 31-23s-14e	*	1766
OKO Oil Co., Kunsicker 1, se c 14-24s-13e	25	1670

*Failures; †Junked; ¶Million cu. ft. gas.



No mangled legs or crushed fingers here. Children can't get over and can't get under so they play somewhere else.

NEW MEXICO

Lea County completes 11 and starts 13 new tests.

* * *

Penrose sandy lime area outpost is good well.

* * *

Texaco's test on south flank of Monument fails.

Hobbs, N. M.—Lea County accounted for 13 new tests last week, while during the same period there were 11 oil wells and a semi-wildcat failure listed as completions. Monument field was assigned five new projects, on the east, west and north edges of production, and each will require one or more offsets. Wildcatting has taken an upturn since the development of the Monument and Eunice fields, leading drilling centers for more than a year.

Amerada Petroleum Corporation's H. Corrigan 1, SW SW NE 4-22s-37e, offsetting production in the north portion of the Penrose sandy-lime area, gauged 237 barrels in 11-2/3 hours, with the flow restricted to one half-inch choke during the last nine hours, after using 2000 gallons of acid at 3750 feet. Sand section of the broken pay zone was cut off by setting pipe at 3602 feet. Landreth Production Corporation has started operations on Grizzell 3, C NW SW 5-22s-37e.

Ohio Oil Company's McGrail 3, C SE NE 27-19s-36e, is a new project for the west edge of Monument and is two locations removed from production.

The Texas Company's State-Lieu 11, C NW NW 20-20s-37e, located on the south line of production, failed to flow after using 2000 gallons of acid followed by 5000 gallons at 3867 feet, and will perforate casing. This company has made location for Saunders 4, C NE SW 18-19s-37e, and Gulf Oil Corporation has started operations on State-Kutter 2-C, C SW NE 18-19s-37e. Both are on the north end of the field.

Skelly Oil Company has awarded contract for the drilling of the remaining two locations on its Van Etten 320-acre lease, 9-20s-37e.

Continental Oil Company et al's Sanderson 1-B-14, C NE NE 14-20s-36e, southwest edge location, kicked off with input gas and gauged 19 barrels per hour natural from lime at 3896 feet on three quarter-inch choke, with 100 pounds tubing pressure and 300 pounds on casing.

Eunice and Langlie fields each accounted for locations. In the latter area, Anderson-Prichard Production Corporation made location for Gregory 1, C NE NW 33-35s-37e, and Langlie 1, C NE SE 8-25s-37e. Two States Oil Company has rigged up to drill Stuart 1, SW NW SW 11-25s-37e. Sun Oil Company's Stuart 3, C NE NE 15-25s-37e, gauged 33 barrels oil the first hour after 80-quart nitro shot in sandy-lime at 3285-3330 feet. Repollo Oil Company's White 1, SE SE SE 24-20s-36e, and Stanolind Oil & Gas Company's Gilluly 5-A, C NW NE 25-20s-36e, are on the northwest edge of production for the Eunice field.

Phillips Petroleum Company is undertaking its first wildcat in western part of county, having made location for Lea 1, C NW NW 30-17s-34e.

In the southwest sector and potential Delaware lime and sand area, Homestead Oil & Gas Company et al have made location for Clifford 1, C SE SW 16-26s-32e.

NEW MEXICO
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
LEA COUNTY (Eunice)—		
Mid-Continent, H. D. Greer 2, c nw nw 21-22s-36e	1200	3830
Tide Water Associated, J. H. Day 1, c ne nw 6-22s-36e	500	3851
LEA COUNTY (Mattix)—		
Repollo, F. Hair 1, nw nw nw 9-24s-37e	580	3575
LEA COUNTY (Monument)—		
Ohio, State-Hansen 2, c w½ sw ne 16-20s-37e	4000	3868
Repollo, J. R. Phillips 4-B, nw sw nw 31-19s-37e	1500	3920
LEA COUNTY (Penrose)—		
Amerada, H. Corrigan 1, sw sw ne 4-22s-37e	400	3750
F. J. Danglade et al, Christmas-Cowden 1, c se ne 5-22s-37e	350	3735
Empire, A. Walden 2, c ne nw 21-22s-37e	110	3610
Gulf, Baker 1, c se se 5-22s-37e	250	3732
LEA COUNTY (Skelly)—		
Skelly, R. R. Sims 3, c sw se 4-23s-37e	60	3670
R. R. Sims 5, c nw sw 3-23s-37e	150	3610
LEA COUNTY (Wildcat)—		
Stanolind, F. W. Turner 1, c nw nw 20-20s-38e	*	4072

*Failures; †Junked; ¶Million cu. ft. gas.

GULF STARTS TEST
To drill Mexican wildcat near Tamazunchale

Mexican Gulf Oil Company recently started work on a new wildcat in the Tamazunchale district of Mexico, one of the first wildcats to get under way since inception of the government's policy of taking no action on applications for permits to drill.

Recently the government's department of petroleum granted about 16 permits, a majority of which were for the government controlled oil company and Mexican owned organizations.

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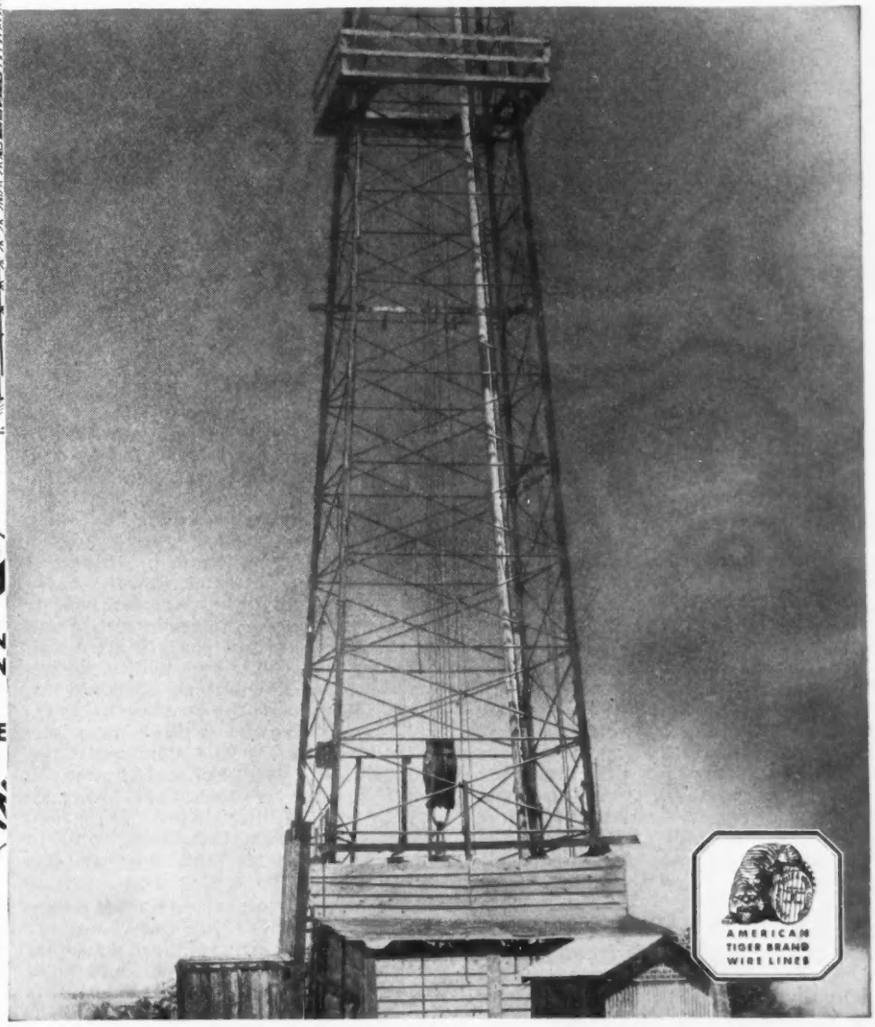

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UNITED STATES STEEL

NORTH AND WEST TEXAS

Third completion extends Bennett northwest.

* * *

Continental may open new field in Gaines County.

* * *

Sand Hills outposts get sulphur water in Permian.

Midland, Texas.—The third completion for Bennett field, Yoakum County, advanced production northwest and recorded the highest structural position in the area. Texas Pacific Coal & Oil Company's Ruth Bennett 2, NWc Section 678, Block D, gauged 310 barrels of 34 gravity oil in 14 hours after a 340-quart nitro shot in saturated lime section at 5226-71 feet, and was awaiting results of treatment with 8000 gallons of acid late last week.

This well is about 20 feet higher structurally than the company's first producer, and is also making a larger volume of gas with the oil flow.

Honolulu Oil Corporation's Bennett 1, west offset, has cemented 7-inch oil string and is due to resume drilling this week. Siosi Oil Corporation has awarded a contract for the immediate drilling of a north offset to the new producer. The field's crude output is transported by tank trucks to the Means field, where deliveries are made to Humble Pipe Line Company.

Free Oil in Yoakum County Test

Appearance of free oil from lime at 5309-13 feet revived the prospects of Bahan-Rhodes & Fitz-Patrick's Shook 1, west central Yoakum County wildcat. It obtained sufficient saturation for a nitro shot and acid treatment before reaching the water level. First oil was logged at 1548 feet sub-sea, and operations have been delayed by fishing job. The same operators' Henard 1, located about 3 miles northwest, logged its first show of oil at 5228 feet, or 1537 feet below sea level, and was abandoned in water topped at 1736 feet sub-sea.

Magnolia Petroleum Company's Taylor 1, wildcat project in northeastern Yoakum County, was drilling in lime at 4880 feet. The Texas Company's Walker 1, C SE SE Section 794, Block D, southwest part of the county, logged top of anhydrite at 2110 feet, with a surface elevation of 3644 feet. Based on this first geological marker, it is about 55 feet higher on structure than the discovery well of the Wasson field, about 8½ miles southeast. Walker 1 has cemented 9-inch pipe at 2170 feet.

Gaines County Field Looms

Continental Oil Company's E. H. Jones 1, C SE NE PSL Section 22, Block A-7, which gives promise of opening a field in northwestern Gaines County, has cemented 7-inch pipe at 4833 feet after logging additional gas in big lime at 4790-96 feet and 4835-38 feet. The first lime was logged at 4020 feet, or 370 feet sub-sea. Argo Oil Corporation's E. H. Jones 1, located 4½ miles north by east and on the same geological feature, is registering a higher structural position in drilling at 3300 feet. The interval between these two wildcats and the Wasson field is being explored by Amerada Petroleum Corporation's Armstrong 1, C NW NW Section 456, now drilling below surface pipe. The latter's Matthews 1, about 1¼ miles southwest of the Wasson discovery, was drilling near the 3900-foot level. A. G. Carter and Continental Oil Company's Langdon 1, about 3 miles northeast of the producer, was drilling below 4300 feet. Three other tests are under way in the Wasson area, and another has rigged up.

In the southern part of Gaines County, Wentz et al's Dalmont-Conoco 1 was abandoned in sulphur water at 4888 feet, and Blevins, Sloan and Shell Petroleum Corporation's Barber 1 was drilling lime at 4670 feet.

Andrews County Wildcat Fails

Oil saturated lime logged at intervals below 4577 feet by Empire Oil & Refining Company's Biles 1, northern Andrews County wildcat, failed to produce on swabbing test through casing at 4638 feet. This test was drilling at 4822 feet, according to late reports. The southwestern corner of this county gained a new wildcat project as result of short term lease owners supporting American Liberty Oil Company in drilling Cowden 1, C NE NW PSL Section 14, Block A-55, which had progressed to 1800 feet.

Sinclair Prairie Oil Company's Emma Cowden 2, near the center of the south line of Andrews County and on a production trend between North Cowden and Fuhrman fields, encountered gas at 4051-55 feet, and developed a fishing job at 4070 feet. It is about 1 mile northwest of the company's abandoned wildcat producer, and is checking higher on structure than the original project.

Outpost locations for the north and south section of the Sand Hills field, Crane County, encountered sulphur water in the Permian and will plug back to be shot. Loffland Brothers Company's Reidland 1, SEc Section 2, Block B-27, logged gas showing at 4238-54 feet and water at 4555 feet. American Liberty Oil Company-Cranfill Brothers' Tubb-Humble 5, located on the south end and offsetting a big producer, used acid at 4435 feet, and swabbed water. These two tests may necessitate sharp revisions in the projected productive limits of the area.

To Link Estes and Gulf-O'Brien

Linking the prolific Estes area, south Ward County, with the Gulf-O'Brien field in the north sector became assured last week when Westexas Oil & Royalty Corporation's University 2-C, SEc Section 6, Block 16, flowed 370 barrels oil in 22 hours from sandy-lime at 2397-2650 feet, with an elevation of 2608 feet. It is about three quarter-mile north of production. The company completed a well in the northeast corner of Section 6 in June, 1935, after plugging off water at 2577 feet. This water zone does not prevail to the north or south.

Expansion of the Estes field to the southwest has caused Sun Oil Company to launch its first test in east corner of Section 36, offsetting recent completions by Standard Oil Company of Texas.

Extension of the lower pay zone of Estes more than one mile southwest and into Section 22 was promised last week when Sid W. Richardson et al's Johnson-Sun 32-B, cored saturated lime at 3014-18 feet, with the hole bottomed at 3062 feet. It has an elevation of 2572 feet.

Goldsmith Defined on East

The east border of production in the Goldsmith field, Ector County, was partially defined when Continental Oil Company issued plugging orders for Wight 1-A, SWc T&P Section 18, Block 43, T-1-S, after testing 2,300,000 feet of dry gas following a nitro shot at 4143-83 feet. It drilled to water at 4250-4455 feet, with an elevation of 3071 feet.

A large quota of wildcat projects for the Permian basin continues each week. Frank Bates et al have financed a 5500-foot wildcat project near the center of the south line of Hockley County, with location in Section 5, PSL Survey, Block I. Two majors are credited with having contracted to pay a total of $26,000 for lease protection. Nearby lease owners are to contribute acreage or dry hole money.

Drilling & Exploration Company, Inc. assumed a two-well contract to explore wildcat acreage to the southwest and west of the Deep Rock-Ogden field, Andrews County, and the first project will be on the Thornberry land, SE SE NW PSL Section 8, Block A-42. Location was also made for Munger-Nix 1, C SW PSL Section 20, Block A-47.

Maverick Oil Company has started operations on Halmsley 1, NW NE NE Section 16, Block B, CCSD&RGNG Ry. Survey, Upton County, having received cash contribution and lease on 320 acres from Humble Oil & Refining Company.

Phillips Petroleum Company is ex-

panding its activities, having recently made location for Grierson 1, C NE SE Section 71, Block OW, Pecos County, about 11 miles northwest of Fort Stockton and north of abandoned production discovered by the company. The latter has also started work on a joint wildcat with Pure Oil Company in northeastern Ector County.

Moore County wildcat flows 300 barrels in seven hours

Borger, Texas.—A natural flow of 300 barrels of high gravity oil in seven hours was developed by Phillips Petroleum Company's Ray Ebling-McDowell 1, northeastern Moore County wildcat, after deepening five feet to 3215 feet, and it will be carried deeper into the dolomite zone. Originally launched as a gas project on acreage farmed out by Gulf Oil Corporation, this well produced 14,000,000 feet of gas daily from upper lime and 190 barrels of oil in 12 hours early last June at 3210 feet. Flood waters forced suspension of operations for several weeks. Gas flow was excluded by cementing 5-3/16-inch pipe at 3164 feet. Location is at the center of AB&M Section 18, Block M-16, near the Hutchinson County line.

Shell Petroleum Corporation's A. J. Donelson 1-A, C E½ T&NO Section 176, Block 3-T, Sunray field, Moore County, caught fire July 5 while producing about 38,000,000 feet of dry gas from lime at 2705-3085 feet, and burned for two days. The fire was extinguished with nitro.

A semi-wildcat project for the north flank of the buried granite ridge in west central Wheeler County has been contracted by Shell Petroleum Corporation in assembling a 3600-acre drilling block. Location has been tentatively assigned to the B. Shelton tract, NE SE NE H&GN Ry. Section 68, Block 24, about one mile northwest of oil production and the same distance northeast of a 2650-foot failure.

New producing horizon found in Jones County

Abilene, Texas.—Initial gauge of 630 barrels of oil in three hours recorded by Iron Mountain Oil Company and Humble Oil & Refining Company's Carl Olander 1, northeastern Jones County wildcat, establishes a new producing horizon and is the largest well in the county. Production is from lower Canyon lime zone at 3241-3250 feet, which was treated with 3000 gallons of acid solution for the big flow. The well swabbed 140 barrels in 24 hours prior to treating with acid. Owners were preparing to kill the oil and gas flow late last week to cement a split joint of casing that developed after using acid. Location is about three miles east by north of Avoca, and six miles north of the Leuders field.

An aggressive drilling campaign will be staged in the new Canyon line area in the event the three authorized offsets to the discovery well yield attractive production. Orlander 1 is located in NEc SW¼ Section 196, BBB&C Ry. Survey, and on a drilling block of about 1250 acres owned jointly by the discoverers. Humble Oil & Refining Company holds lease on a large block of adjoining acreage. Maracaibo Oil Exploration Corporation, new entrant into the district, and W. L. Pickens, owners of the east offset 80-acre tract, are moving in rig to drill their first test. Discoverers have locations for a north and northeast diagonal offset. Humble Pipe Line Company has provided a pipe line connection.

The Canyon lime has been reached by comparatively few tests in eastern Jones County, which has attained somewhat of a record in a few producing areas with its multiple oil zones of Pennsylvanian age. This new lime horizon may be productive in some of the established fields, and will be sought by future wildcat projects. Canyon lime is known as an erratic source of high gravity oil production in West Central and North Texas districts, although it affords profitable operations with the aid of acid solution to stimulate the oil yield. Canyon lime is productive in the Woodson field, Throckmorton County, and also prevails in the Chalk Hill field, Archer County; Rock Crossing field, Wilbarger County; Johnson Ranch field, western Foard County; and in several Cooke County areas.

Southern Oil Corporation of America was scheduled to run a string of 7-inch casing late last week for completion of its Joe Robinson 1, which opened a new field for Fisher County last May 15 from sandy-lime at 3502-3505 feet. The well flowed 20 barrels per hour through cracked gate valve for several days, and was shut in to cement an oil string. It is located near C E½ NW of H&TC

F. L. Townsend, Chief Inspector, and D. K. Stephens, Superintendent of Construction, Panhandle Eastern Pipe Line Company.

TEXAS PANHANDLE
Completions

Company, Well, Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
Empire, Deahl 3	¶8.6	2912
Magnolia Pet. Co. 12-D	84	3209
Magnolia, Fee 24, lse 244	782	3020
Fee 25, lse 244	407	2930
GRAY COUNTY—		
Bradshaw O&G Co., D. Pope 3	470	3310
Humble, Merten Bros. 7	335	3269
Mordyan Pet. Co., M. B. Davis 6	145	2854
Sinclair Prairie, A. Smith 5	347	3280
HUTCHINSON COUNTY—		
Alma Oil Co., E. Thompson 1	485	3103
J. H. S. Bonner, Tr., J. W. Moore 3	406	3151
Danube Oil Corp., W. A. Starnes 2	1017	3184
Phillips, R C. Kay 1	431	3255
Skelly, M. B. Armstrong-Byrd 13	¶8.7	3232
The Texas Co., R. L. Pond 9	504	2986
Turman Oil Co. et al, J. A. Whittenburg 12-A	806	2800
J. A. Whittenburg 6-B	801	2742
MOORE COUNTY—		
Skelly, M. B. Armstrong-Byrd 12	¶3½	3115
WHEELER COUNTY—		
C. S. Allender et al, J. B. Harvey 1	¶39	2207

*Failures; †Junked; ¶Million cu. ft. gas.

WEST CENTRAL TEXAS
Completions

Company, Well, Location	Init. Prod. Bbls.	Depth
BROWN COUNTY—		
Armoil Prod. Co., Armstrong 1	10	1409
Charter O&G Co., Lobstein 2	*	1370
Donald P. Kenyon et al, Stone 1	*	1250
Kewanee O&G Co., Hickman 29	21	1305
CALLAHAN COUNTY—		
Mesa Verde Oil Co., Klepper 1	*	1882
Owen M. Murray et al, Estes 1	*	2251
COLEMAN COUNTY—		
Anzac Oil Corp. et al, Overall 18	*	2270
Brannon & Murray, Younglove 4	35	1950
Geo. Poulter et al, Overall 1	*	1244
EASTLAND COUNTY—		
Barnett Pet. Corp., L. C. Downtain 1	70	1494
J. A. Bearman et al, Poe 1	*	3810
F. J. Estes et al, Gentry 2	*	2985
Hoffman & Page, Holcomb 1	*	1627
States Oil Corp., Farrack 9	8	1877
PALO PINTO COUNTY—		
Palo Pinto Oil Corp., Strawn 19	¶2	3060
SHACKELFORD COUNTY—		
Albany Oil Co. & Pardue, Davis 11	70	1625
Butler & Horn, Morris-Buie 14	30	1606
Morris-Buie 15	125	1587
Charter O&G Co. et al, Davis 2	20	1645
Danciger Oil & Refineries, Inc., Davus-Walker 1	38	1564
Forest Dev. Corp., McKeever 1	*	1919
R. F. Gilman et al, Jeter 18	5	897
Jeter 19	16	894
R. H. Guinn et al, Childers 1	*	507
Hammond Oil Co.-Fortex Oil Corp., Lee 1	20	1058
Healey Drlg. Co. et al, Ackers 1	*	1937
A. Housley et al, Reynolds 8	7	896
John Korp et al, Chio 2	*	603
Owens-James & Jones, Morris-Buie 12	60	1596
Morris-Buie 13	95	1586
Roeser & Pendleton, Inc., E. S. Dawson 30	188	1616
E. S. Dawson 31	159	1624
E. S. Dawson 32	106	1605
E. S. Dawson 33	76	1608
Sedwick & Hammond Oil Co., Dawson 1	*	1795
Ungren & Frazier, Snyder 1-C	*	1095
West Texas Oil & Roy. Co., Davis 2	*	1741
Thos. Wittmer et al, Lones 2	*	1019
STEPHENS COUNTY—		
Aarco O&G Co., Atkins 1	*	3302

*Failures; †Junked; ¶Million cu. ft. gas.

Section 172, Block 2, about 3½ miles west by south of nearest production in the Rhotan area. Tide Water Associated Oil Company's E. L. Smith 1, east offset, was drilling at 2020 feet. Magnolia Petroleum Company made location for a test ⅜-mile east of the discovery, but has not launched operations.

WEST TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ANDREWS COUNTY (Fuhrman)—		
Fuhrman Pet. Corp., W. H. Boner 6-B	818	4500
CRANE COUNTY (McCamey)—		
E. J. Boesecke Jr. et al, E. S. Hughes 1	811	2270
Texas Consolidated Oil Co., Hughes-Texas Co. 7	658	2096
Bert Fields et al, A. Gibbs-Conoco 7	800	2270
CRANE COUNTY (Gulf-McElroy)—		
Gulf, J. T. McElroy 151	311	3008
ECTOR COUNTY (Goldsmith) —		
Continental, L. E. Wight 1-A, sec 18	*	4455
W. H. Dunning Est., C. Scharbauer 2-A	1167	4225
Gulf, C. A. Goldsmith 27	1127	4215
Landreth Prod. Corp., C. Scharbauer 4D	1468	4250
C. Scharbauer 4-F	1480	4228
C. Scharbauer 5-G	1214	4224
Phillips-Pure, C. Cowden 11	3848	4167
Rogers & Rogers, TP Land Trust 1	†	4333
Shell, H. E. Cummins 1-B	236	4260
ECTOR COUNTY (North Cowden)—		
Stanolind, J. M. Cowden 50	442	4297
FISHER COUNTY (Royston)—		
H. W. Martin & O. W. Brubaker, M. M. Brown 1	45	3194
GAINES COUNTY—		
Lou Wentz et al, P. W. Dalmont-Conoco 1	*	4888
HOWARD COUNTY—		
Johnson & Bruce, W. T. Scott 1	15	1348
Owen M. Murray et al, W. D. Logan 3	573	2825
Superior Oil Corp., Roberts 35-B	2088	2981
JONES COUNTY—		
Condor Pet. Co., C. W. Logsdon 1	116	1917
Oil States Explor. Co. et al, J. H. White 2-B	190	1752
Ungren & Frazier, H. Dorsey 11	562	2217
H. Dorsey 16-C	502	2147
Dan E. Whatley et al, W. B. Brazelton 1	*	2511
MENARD COUNTY—		
H. C. Grafa et al, D. N. Kothmann 1	*	1123
PECOS COUNTY (Taylor-Link)—		
B. C. Mann et al, University 1	132	1643
PECOS COUNTY (Wildcat)—		
W. Y. Penn et al, H. Tipton 1	*	2425
TAYLOR COUNTY—		
Feltmont Corp., I. Blackwell 1	*	1805
SCURRY COUNTY—		
E. L. Goos et al, J. W. Henderson 1	*	3377
UPTON COUNTY (McCamey)—		
A. D. Devore & J. R. Minnich, Burleson-Conoco 2	500	2155
Sun, M. L. Baker 3	342	2352
WARD COUNTY—		
Amerada, McDonald 6	657	2425
Atlantic, W. D. Johnson 28	357	2550
Clark-Mayfield & Aldrich, F. C. Green 1	310	2362
Gulf, E. W. Estes 36	1456	2620
Humble, L. Richter 16	1204	2962
Sinclair Prairie, H. Archenhold 9	395	3044
Turman Oil Co., Sloan-Llano 8	224	2473
Standard of Texas, I. B. McFarland 4, sec 29	304	2647
I. B. McFarland 14, sec 37	520	2640
I. B. McFarland 15, sec 37	384	2675
WINKLER COUNTY (Emperor)—		
Emperor Oil Co., L. Halley 1-C, sec 12	1061	2907
Emperor and S. J. Iverson, Thompson-Cowden 1	955	2950
WINKLER COUNTY (Halley)—		
Skelly, S. M. Halley 20	382	2888
WINKLER COUNTY (Kermit)—		
Eastland Oil Co., R. Clapp-Pure 7	996	3160
Humble, N. R. Colby 19-A	887	3115
N. R. Colby 14-C	1026	3085
Magnolia, J. B. Walton 87	547	3286
J. B. Walton 89	332	3250
Navarro Oil Co., F. S. Vaden 3	557	3050
TP C&O Co., Brown-Altman 2, lse 1	253	3050
L. Daugherty 21	503	2945

*Failures; †Junked; ¶Million cu. ft. gas.

Start seven Oklahoma wildcats and resume on four more

Tulsa.—Last week Oklahoma wildcat operators made locations or began operations on seven ventures and renewed operations at four more.

One of the more interesting of the renewals was Power Oil Company's Lancaster Trust Company 1, CSW NE 10-1s-2e, near Davis in Murray County. The well had been shut down since April 20 after plugging back to 3175 feet. It was last week enlarging cellar and pits, preparatory to further testing. Location was made August 4, 1936.

The starts were widely scattered. Hollenbach et al's Ward 1, SW SE NE 30-7n-1e, was an important test, digging cellar and pits. It is northeast of Lexington in Cleveland County. In Creek County, L. B. Jackson started Alberty 1, NEc NW 25-18n-9e, west of the Kellyville district.

Kay County had one renewal and one abandoned well. The renewal was Black Gold Oil Company's Cooley 2, SWc 25-28n-4e, northwest of the Burbank pool, drilling ahead at 370 feet. The failure was Prunty Production Company's Westgate 1-A, NWc 12-26n-2w, at the south end of Hubbard pool. It was abandoned at 3775 feet.

In Kiowa County, southeast of Hobart, McWherter & Francis' Padgett 1, NE NW SE 3-5n-17w, was abandoned at 511 feet. Nearest production was in the scattered Gotebo district. Operations were underway at Logan County's newest venture, Sunray Oil Company and Olson Oil Company's Canning 1, SWc NE 31-17n-1w, which was digging cellar. It is southwest of Langston pool.

Northeast of Morrison in eastern Noble County, Herndon Drilling Company had rig up for Baggett 1, SEc 13-21n-3e. Down in Okfuskee County, F. W. Merrick's Mackey 1, NEc SW 29-11n-10e, was spudding. It is located west of the Clearview pool. The start for Pottawatomie County was C. H. Yookum's No. 1, at SEc NE 27-6n-4e, which was digging cellar and pits. It is between the Asher and Gray pools of the county.

NORTH TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
Bridwell Oil Co., Oil Inv. Co. 30-B, blk 125	*	1475
Deep Oil Dev. Co., L. W. Wilson-McCrory 19	628	2255
Dick Duncan et al, N. I. Andrews 4, blk 21	15	1010
T. L. Looney et al, L. W. McCrory-Wilson 1, sec 71	*	1456
Nancy McChesney et al, G. M. Benson 4, sec 1829	*	869
T. J. Miller et al, J. M. Bloodworth 1	*	1293
The Texas Co., I. H. Turbeville 1-K	*	1607
CLAY COUNTY—		
L. T. Burns et al, H. Sanzenbacher 1	*	3914
Metzner & L. T. Burns, J. J. Taylor 6, sec 23	4	215
Thornberry 21, blk 6	2	282
Thornberry 22	*	360
Thornberry 23	4	215
Thornberry 24, lot 11	*	110
COOKE COUNTY—		
John Greathouse et al, Ed. Wilson 1	380	1943
DENTON COUNTY (Bolivar)—		
A. A. Lander, Inc., Gibson Bros. 1	¶5	1600
Oil Finance Corp., J. S. Gamble 1-A	*	2380
HASKELL COUNTY—		
Danciger Oil & Refineries, Inc., Pardue 1	*	2368
Forest Dev. Corp., Pardue 1	*	2250
JACK COUNTY—		
Cato Oil Co., Bryson 3	350	3083
Hill & Hill, Clayton Bros. 3-B	344	3013
Mar-Tex Oil Co., W. J. Chambers 11	240	2990
Moncrief & Showers, S. M. Jones 5	347	3210
MONTAGUE COUNTY—		
Moss & Holmes, J. N. Monroe 1	*	2513
Lesh & McCall, Cunningham 18-A	10	936
C. B. Dodson-Jordan 1	*	3511
The Texas Co., Lemmons 6	40	929
THROCKMORTON COUNTY—		
Canyon O&G Co., G. C. Wright 3, sec 279	*	358
WICHITA COUNTY—		
Coleman & Coppock, Hodges 10, blk 39	25	830
G. W. Cooper et al, Waggoner 23-C	264	1640
King Oil Co., M. M. Stone 6-A	*	1643
Panhandle Ref. Co., L. F. Ramming 14	15	1755
Perkins & Cullum, S. B. Burnett 1-A, sec 1	†	1835
Peters & McCarty, E. F. Hardin 39	*	564
WILBARGER COUNTY—		
King Oil Co., Waggoner Est. 2-T, sec 103	*	2335
F. A. Lain et al, Mrs. D. Coffee 1, sec 44	†	6612
Phillips Pet. Co., Waggoner Est. 196	2000	3097
C. C. Wilson et al, Waggoner Est. 1	24	1113
YOUNG COUNTY—		
S. S. Alexander et al, M. L. Clark 4, sec 209	*	1112
Combs & Glade, E. Hall 1	4	733
D. C. Nelson & Mathis, W. W. Cope 1, sec 1475	*	904
T. G. Shaw Oil Corp., J. L. McLaren 1, sec 6	*	3020
R. H. Vise et al, Norton 2, sec 615	1399	3828
R. W. Easterling 1, sec 426	1170	3837
F. F. Yockstick et al, G. Stewart 1	*	850

*Failures; †Junked; ¶Million cu. ft. gas.

East Texas salt water output 53,358 barrels daily

Kilgore.—Salt water production in the East Texas field has increased to 53,358 barrels daily, according to a recent survey conducted by the Texas Railroad Commission's engineer.

The volume of water is from 2595 pumping and flowing wells, and amounts to an average of 20.56 barrels daily per well, or a fraction of a barrel greater than the average daily proration allowable of these producers.

The report credits the field with 3663 pumping wells, and water is being produced by 1518 pumpers. A total of 358 wells are produced by air-gas lift, with 72 of these wells making water.

Production of salt water is largely confined to the west portion and edges of the field. Most of the properties that produce water are depending upon lease pits as a means of disposal.

No AIMME Summer Meetings

Houston.—Summer sessions of the Gulf Coast section of the American Institute of Mining and Metallurgical Engineers will be suspended until October, at which time members will receive announcement of the first fall meeting, according to an announcement of Alexander Deussen, secretary and treasurer of the section.

J. D. FARISH, 49, attorney for Navarro Oil Company, and nephew of Jefferson Davis, president of the Confederacy, died in Houston July 3 after a short illness. He was a cousin of S. P. and R. D. Farish, independent operators, and of W. S. Farish, president of Standard Oil Company of New Jersey.

EAST TEXAS

Talco edge test requires another acid dose.

* * *

Mexia test to penetrate Travis Peak horizon.

Tyler, Texas.—Excessive pressure used in trying to inject 2000 gallons of acid solution in the lower Trinity saturated lime recently uncovered by Magnolia Petroleum Company's J. A. Chapman 2, located on the east edge of the Talco field, Titus County, caused water to break through the bottom hole plugs. The hole will be plugged back again and re-acidized. Oil saturation was logged in second Glen Rose at 5588-5620 feet, with first water at 5643 feet. The hole was plugged back from 5661 feet to 5620 feet, and 500 gallons of acid was absorbed by the formation at 2100 pounds pressure, and 400 gallons followed at 3000 pounds.

To Penetrate Travis Peak

Penetration of the Travis Peak horizon is to be attempted by Pure Oil Company's Kendrick 16, offsetting production in Mexia field, Limestone County, after failing to develop oil or gas in the lower Glen Rose lime series. Top of Travis Peak was logged at 5656 feet, or 5136 feet sub-sea, and the test was logging lime and shale at 6030 feet. A similar goal has been set for Stanolind Oil & Gas Company's Hawks 1, located on the Campbell faulted structure, Hunt County, when the remainder of drill pipe lost at 6570 feet is recovered. The hole was being reamed to land a protection string of pipe when drill pipe parted mid-June.

Nominal heads of oil and acid water have been made at intervals by Roeser & Pendleton Inc.'s Bowyer 3, prospective lower Trinity producer for the west edge of the Cayuga field, after using 10,000 gallons of acid solution at 7676 feet.

Sharp drop in Texas permits for new wells

Austin.—The Texas Railroad Commission approved last week permits for drilling 185 new wells in Texas, 272 less than were allowed the week before.

In East Texas field there was only 1 new location, that being in Rusk County. The East Central Texas district approved 17 scattered locations.

West Texas reported 15 new permits, while the Panhandle area listed 13 new locations.

There were 39 locations from North Texas district, 11 being in Wichita County. In the West Central area there were 18 new permits.

There were 42 permits for wells scattered throughout the Gulf Coast district. Southwest Texas reported 40 permits, of which 11 were in Duval County and 11 in McMullen County.

EAST TEXAS
Completions

Company, Well, Location	Init. Prod Bbls.	Depth
JOINER AREA—		
Bell Oils, Inc.-Bennett Pet. Corp. (B & B Oil Co.), Arterberry 2 (3-ac)	3000	3839
British-American O. P. Co., Mayfield 7 (45-ac)	7000	3619
Genecov Drlg. Co.-Sam Roosth, Pace-Bateman 7 (39-ac)	2000	3768
W. H. Gant-Garvin-Wegener, W. P. Moore 39 (134.24-ac)	600	3555
Iowa Payne Oil Co., F. B. Wilson 4 (25-ac)	500	3751
E. W. & F. D. Jones, W. P. Moore 7 (33-ac)	8000	3662
Magnolia, O. H. Grissom 10 (84.12-ac)	7000	3674
Ohio, M. C. DeGuerin 21 (158-ac)	5000	3653
H. L. Griffin 16 (65.61-ac)	240	3700
H. L. Griffin 17 (65.61-ac)	240	3727
A. V. Riley et al, Geo. Curbo 1	60	3614
Snetcher & Pittman, F. J. Cox 6 17.97-ac)	4000	3688
Stanolind, H. C. Maxwell 30-A (110.45-ac)	7000	3789
J. B. Millstead 16 (90¼-ac)	3600	3755
Sun, J. P. Seale 8 (199.32-ac)	150	3711
Texas Canadian Oil Corp., A. Kelly 3-B (107.76-ac)	600	3701
Termo Oil Co., F. B. Fox 12-A (44.14-ac)	6800	3753
Wheelis Oil Corp., I. J. Smith 16 (92.2-ac)	5000	3692
KILGORE AREA—		
O. D. Adams et al, R. H. Still 3	175	3568
B. & R. Investment Co., Bean-Willoughby 3	1500	3543
Empire, E. Muckelroy 8 (36.95-ac)	8700	3563
Ford Oil Corp. (was DeArman-Gilster), Faircloth 2 (5.08-ac)	1500	3540
E. J. Gray-Mrs. Bess Johnson, M. E. Hale-Adams 1, blk 120	750	3585
Gulf, J. S. Elder 5 (33¼-ac)	5600	3533
C. M. Jernigan 17 (88.82-ac)	10,000	3690
Humble, O. Roberson 7 (57.05-ac)	1500	3610
Magnolia, W. P. Moore 19 (152-ac)	11,000	3671
C. L. McMahon et al, S. S. Laird 12 (45-ac)	7200	3631
Potter Bros. Prod. Co., L. Alexander 3 (4½-ac)	240	3514
Shell, J. B. Watson 67 (385.2-ac)	9000	3585
Sinclair Prairie, A. A. King 19-B, Tr. 2 (111.8-ac)	5800	3485
Sun, A. G. Morton 24 (336.24-ac)	1500	3445
The Texas Co., W. P. Chappell 11 (84.37-ac)	3600	3675
Tide Water Associated, Nat Bean 12-A (58.06-ac)	7000	3647
Welch & Sandler, D. Barnett-Tidal 12 (107-ac)	400	3747
LONGVIEW AREA—		
Arkansas Fuel Oil Co., P. D. Harrison 7-A (36-ac)	126	3600
Atlantic Ref. Co., J. M. Moore 69 (447¼-ac)	10,400	3610
J. M. Moore 74 (447¼-ac)	11,000	3631
Atlantic-Sun Oil Co., M. Hays 78 (448-ac)	12,000	3608
W. W. Bradley et al, O. F. Smith 9 (28½-ac)	4000	3614
E. E. Burks et al, J. E. Medlin 1	500	3736
John Coates et al, Nell Buie 4 (13½-ac)	5500	3602
J. W. Croley & G. M. Cosby, A. Christian 2 (2-ac)	4500	3572
Dean Bros.-Albert Adkisson, O. M. Victory 10 (30.3-ac)	700	3684
Empire, J. C. Bumpas 18 (60-ac)	10,000	3568
Gulf, S. C. Fishburn 28 (200-ac)	9600	3483
E. C. Johnston et al, Fee 6-B (26.3-ac)	1200	3717
E. C. & M. M. Johnston, C. F. Williams 6 (44-ac)	600	3720
Dan LaRoe et al, J. E. DeMoss 2 (4-ac)	240	3646
Lester & Duffield, J. E. Jones 5 (40.7-ac)	900	3736
Joe Long Drlg. Co., W. W. Owens 9-AA (208-ac)	750	3672
Magnolia, H. Fenton 7 (50-ac)	1500	3764
P. H. Pewitt et al, J. T. Jones 7 (46.3-ac)	4200	3775
B. F. Phillips et al, Douphrate 1-C (5-ac)	30	3776
Rudco O&G Co., W. R. Nicholson 1 (113½-ac)	600	3667
B. A. Skipper Oil Co., Thad Snoddy 3 (4-ac)	9000	3602
Stanolind, Stuckey - Thrasher 10-A (40.37-ac)	7500	3587
The Texas Co., E. M. Woods 16 91½-ac)	5000	3573
Tide Water Associated, B. Moore 17 (90-ac)	11,000	3552
ANDERSON COUNTY (Cayuga)—		
Tide Water Associated-Seaboard., Royal-Cone 3-C	¶50	4087
ANDERSON COUNTY (Long Lake)—		
Tide Water Associated-Seaboard, Z. Williams 3	2000	5346
FRANKLIN COUNTY (Talco)—		
Byrd & Frost, Inc., E. L. Phillips-Gulf 9 (400-ac)	402	4242
Humble, P. J. Dawson 5 (80.45-ac)	311	4323
Stroube & Stroube, M. L. Norman-Prince 1 (35-ac)	600	4273
HENDERSON COUNTY (Cayuga)—		
Goodnight Oil Co.-P. F. Rutledge, M. M. Nash-Ford 1 (20-ac)	*	4123
HOPKINS COUNTY (Sulphur Bluff)—		
F. D. Jones et al, A. A. Bassham-Gulf 2-A (207-ac)	600	4547
TITUS COUNTY (Talco)—		
Adams & Lyles, Pat Davis 8 (41.7-ac)	184	4319
J. R. Milligan-Humble 1 (18¾-ac)	276	4310
Byrd & Frost, Inc., Hargrove-Gulf 5 (74-ac)	331	4243
W. B. Hinton et al, L. H. Wilson 7 (119.51-ac)	600	4302
Housh & Thompson, Inc., C. L. Owings 8 (109-ac)	512	4300
Humble, L. Blackburn 8 (120.26-ac)	323	4294
A. P. King-Hughes 41 (1053.36-ac)	225	4209
L. Stevenson 3 (88.1-ac)	18	4358
I. N. Williams 2 (39.86-ac)	232	4325
Y. Rogers-Rozel Oil Corp., J. T. Belcher 1, lot 2, blk 20	*	532
VAN ZANDT COUNTY (Van)—		
Humble, E. E. Carroll 10 (98.8-ac)	1500	2938
FREESTONE COUNTY—		
O. L. Gragg Oil Co.-C. L. Carter, Carter-Gragg 1 (696½-ac)	*	5315
HOPKINS COUNTY—		
Carpenter Oil Corp., C. D. Gillis 1 (53¾-ac)	*	4498
CASS COUNTY (Rodessa)—		
American Liberty, Tyson 2, Cass Co. Sch. Land sur	298	6041
R. W. Norton, Moore 5, J. S. Smith sur	317	6004
United Prod. Corp., Allday 2, Priscilla Evans sur	325	5920
Bauguss 6, Robt. Trammell sur	*	5918
MARION COUNTY (Rodessa)—		
Ark. La., C. C. Braden 1, Thos. Hamsen sur	¶5	6870
The Hunter Co., E. W. Fonda 2, A. de los Santos Coy sur	720	6095

*Failures; †Junked; ¶Million cu. ft. gas.

SOUTH TEXAS

Failure lessens Sweden chance for big field.

* * *

Caldwell County may be one big chalk field.

* * *

Frio and Vicksburg hold South Coast interest.

Corpus Christi.—Exploration of deep Frio and Vicksburg possibilities becomes the main development in South Texas Gulf Coast as a very heavy campaign of 7000- to 9500-foot wells is underway in practically every county of this district. While several of the most recent tests have been rather disappointing, the program is not being hindered.

L. M. Lockhart's Ollie Purl 1, Lot 2, Section 7, in the Agua Dulce field, Nueces County, found an oil and gas sand at 7032-52 feet, where the well tried to blow out. Drill pipe was stuck and all but 550 feet removed. Final efforts are being made to recover the stem, which, if unsuccessful, will result in a sidetracking job. This sand was encountered at 7336-7396 feet, carrying oil and gas in United Production Corporation's W. H. Harvey 1, one mile to the west. This well, however, drilled to 9002 feet and attempted completion through perforations. It showed high gas-oil ratio on first tests, then started making salt water, causing its temporary abandonment. This company is drilling two more 7000-foot tests to the Vicksburg in this field. M. L. Rivers 3-A is drilling below 6000 feet after setting a string of 9⅝-inch casing for protection, and T. S. Schroeder 1 is drilling below surface casing. Southern Minerals Corporation's H. G. Yakey 1, 1½ miles east of Agua Dulce, has been started to this sand. To the south of the field, Conroe Drilling Company's Hagen & Stewart 1 was drilling below 4000 feet and is scheduled to become another deep test.

To Test Frio Sand

Magnolia Petroleum Company et al's A. A. Seeligson 7, southeastern Jim Wells County, encountered another oil and gas sand, the newest being at 6080 feet. It is being cored in about 10 feet for a drill stem test. This well, projected to 9200 feet, has shown a series of oil and gas sands to its present level in the Frio.

Also in Jim Wells County, Tsesmelis and Reese's M. Earhart 1, Suggs Survey, near Armagosa field, at 4005 feet is a 40,000,000 cubic foot gasser through perforations at 2173-81 feet. Pressure is 900 pounds.

The deepest test at this time along the South Texas Coast is Barnsdall Oil Company's Kate Edwards 1-A, on the Lamar prospect, Aransas County, which is drilling below 9150 feet. Several miles to the west, McCampbell field, same county, is carrying on a twin well drilling campaign to the 7100- and 6650-foot Frio and Marginulina sands.

Wildcat Coring Salt Water Sand

George J. Greer et al's J. R. Davis 1, on Red Fish Lake prospect, Jackson County, was coring in salt water sand at 5604 feet. The Texas Company has started milling out around 4685 feet in Hultquest 1, which is being reworked. The test, located in the Ganado field, made a high gas-oil ratio on first completion in the 5100-foot sand.

Returning to Nueces County, several key wildcats have been started. Fain Gillock et al's Robert Poenisch 2, Block 32, two miles west of Flour Bluff, is drilling at a shallow depth. J. K. Culton's I. M. Singer 1, Block 39, an attempt to extend the field two miles to the southwest, failed and the well was abandoned at 7010 feet. Several miles farther northwest and five miles south of Corpus Christi, Sam E. Wilson, Jr., has started a 7000-foot test in J. F. Herold 1, on the Bohemian Colony subdivision. It is on a likely prospect. Seaboard Oil Corporation's Chapman 1-C, 4½ miles southwest of Chapman Ranch field, was drilling below 3900 feet, while Ed Jurica 1, Section 32, 5½ miles southwest of Corpus Christi, was rigging up to deepen from 5554 feet. It had been abandoned.

Important Saxet Development

The 4000-foot sand producing at Clarkwood was either extended two miles to the northeast or an entirely new lens opened in the Saxet field by Donico Production Company's V. M. Donigan 7. After drilling to 4305 feet, casing was perforated at 4080-84 feet and the test flowed at the rate of 196.5 barrels per day through 3/16-inch choke under pressures of 50 pounds on tubing and 350 pounds on casing. The well is in Section 7, Range 6. A disappointment in Mills Bennett's William Heuermann 1, one mile west of the field, was registered when the test showed salt water and was abandoned at 6403 feet. It ran unusually low.

Edwin M. Jones' Ben Shelton 1, on the east side of Refugio field, Refugio County, was drilling ahead below 7250 feet, headed to the 8000-foot sand encountered in the Vicksburg in United Production Corporation's J. J. O'Brien 12. The O'Brien well, 2800 feet to the southwest, drilled to 9225 feet, plugged back, tested salt water around 7900 feet, and has plugged back for further tests.

Reaching Critical Depths

San Patricio County has several key wildcats at important levels. Danrey Oil Company's Jean Davis 1, two miles southwest of McCampbell field, is below 5200 feet, while the Humble Oil & Refining Company's J. S. McCampbell 1, is coring around 6635 feet. Eleanor Oil Company perforated at 6566-74 feet in J. F. Green 1, two miles southeast of Gregory, and is swabbing. Plymouth Oil Company has a fishing job at 5080 feet in Odem 1-A, just east of Sinton, and Wellington Oil Company's Welder 1-B, northwest of Angelita field, is below 4250 feet.

Commonwealth Oil & Gas Company is completing a second well in the new deep sand in the Heyser field. This test, W. H. Bennett 5, is located on the Victoria County side of the producing area. It found the gas sand at 5713 feet and colored oil sand at 5738 feet, the well being bottomed in sand and shale streaks at 5753 feet.

Cockfield of Sweden defined on west by Navarro failure

San Diego, Texas.—Possibilities of a major oil field in the Sweden district of Duval County have been virtually shattered by the failure of the Cockfield to produce in Navarro Oil Company's E. M. Rossi 1. The well, located one mile west of the producing wells in the North field, had a sandy shale section at 5430-62 feet with faint odor and slightly porous blue gray sand carrying salt water at 5462-72 feet, this being in the Cockfield zone.

The test, located in the northeast corner of the south 100-acre portion of the east half of Section 11, has an elevation of 413 feet, topped Jackson at 3944 feet, Hockleyensis at 4317 feet and has two feet of very hard, tight sand with slight odor at 4720-23 feet in the regular section producing in this field. It was running higher than the field, but just about high enough to bring it to normal structurally. The well had drilled to 6179 feet and plugged back to test a sand indicated at 5330-40 feet, the plugged back depth being 5385 feet.

When this field was discovered, predictions ran high that this would be a tremendous producing area with a reserve of fully 100,000,000 barrels. The producing zone, however, was cut rather short to the north and west, placing some very high priced acreage completely out of the picture.

Development Pace Rapid

Despite the failures in the lower sand, development continues at a rapid pace, work centering around both the discovery sand and the newly discovered horizon about 40 feet higher.

Standard Oil Company of Kansas' Parr 1, one mile south of the field, and discovery well of the new sand, flowed 265 barrels in 24 hours from sand at

4738-43 feet and sand and shale streaks to 4747 feet. The flow was through 3/16-inch choke with pressures of 460 pounds on tubing and 720 pounds on casing.

At the north end of the field, Russ Petroleum Corporation's Farias 2 and Parr Oil Corporation's Puig 2 (6) were flowing about ½ of 1 percent salt water, only tests in the field to show water. Both are much lower than the rest of the field and indicate a near limit to production in that direction.

Attempting Southeast Extension

Over southeast of the field, about 2½ miles, King Drilling Company was going ahead below 6450 feet in Parr 1, which failed in the upper sands, while one mile east of the field, Woodley Petroleum Company is moving in for Parr 1, a wildcat. Considerable interest centers around Hiawatha Oil & Gas Company's Southland Life Insurance Company 3, southwest of the North field and about two-thirds of a mile northeast of the main Sweden field. It was coring for the sand at 4936 feet. Just south of the Sweden this company's M. M. Miller 2, is going ahead after a drill stem test of sand at 4948-53 feet developed 60 feet of oily mud cut with salt water in 10 minutes. This is the regular sand of North Sweden.

Several McMullen County wildcats were commanding attention. Edwards & Zock's Two Rivers Ranch, about two miles southeast of Wentz and in SW SW SE Section 60, was coring ahead at 1110 feet after finding salt water at 1100-10 feet. A gas sand had previously been topped at 1076 feet. C. C. Shumway et al's Shiner Ranch 10, Section 51, 10 miles south of Tilden, was attempting to make a drill stem test of Government Wells sand at 1573-84 feet, where considerable saturation was found. The hole, however, has been casing. In the Southwestern portion of the county, Howell Oil Company's Kate Martin 1 ran an electric formation tester at 2910 feet, indicating three possible sands above this level.

Superior Buys Production

Mortimer & Springer's 480-acre J. B. Peal "B" Lease in the Duval County sector of Lopez field, with 28 producing wells, was sold to Superior Oil Corporation of Tulsa for a reported consideration of $500,000 in cash and a like amount out of deferred oil payments. The field is producing from a sand in the Mirando series, Jackson age, at 2200 feet and the recovery is calculated at in excess of 12,000 barrels per acre. Figuring that the 28 producing wells cover 280 acres, this would mean the transfer of a reserve of 3,360,000 barrels.

Another new shallow producing area was being developed several miles west of Freer in Duval County. Government Wells Oil Company, Incorporated's H. A. Lundell 2, 1650 feet out of the northeast corner of Section 140, 1200 feet southeast of Lundell 1, flowed 23 barrels of Mirando type crude per hour through 3/8-inch choke, with tubing pressure of 110 pounds and casing pressure of 375 pounds, sand being logged at 1518-28 feet. The first well made a gasser in the same sand. Magnolia Petroleum Company and Government Wells Oil Company have rigs active in the new pool.

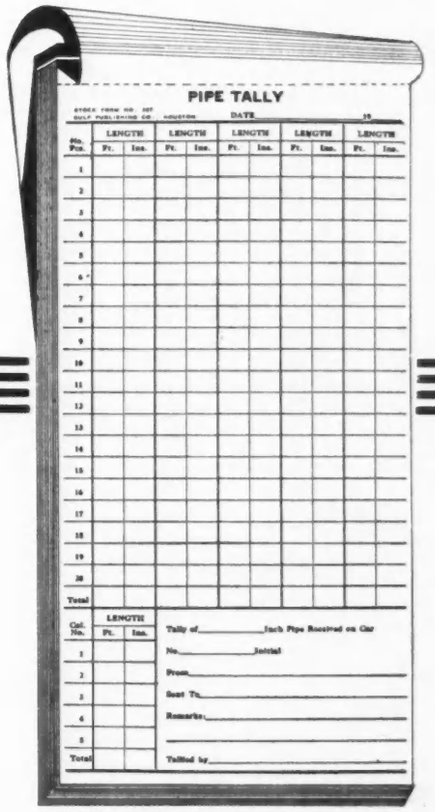
Three Caldwell County fields may be linked by chalk

San Antonio.—Merging of Luling, Branyon and Buchanan into one huge oil field was further indicated during the past week by a series of extensions to these important Caldwell County producing areas. The conections, however, are expected to be only in the chalk zones, the Edwards lime production already being well defined in each of the three pools.

These three fields already have 2900 acres of production with a reserve of some 80,000,000 barrels. Further expansion could place them into the 100,000,000-barrel bracket, but this is possibly optimistic.

The main extensions of the week included Rosita Oil Company's Lockhart State Bank 1, John Roe Survey, 1¼ miles southwest of the Branyon field, which pumped and flowed 33 barrels per hour from 2204 feet, the top of the Austin chalk being at 1975 feet.

About 1½ miles southwest, a well was completed on the S. M. Blackwell tract, also on John Roe Survey, several months ago, making a small producer in the Austin chalk, but further defining the trend of faulting. About 1 mile farther southwest and on strike, several producers have been completed. These wells, in turn, are slightly more than 1 mile from the northeastern portion of Luling field, which has both



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chalk and lime production. At this time, several active operations are under way along this undeveloped section attempting to close in the producing zone. Old wells drilled along trend had showings in the Austin chalk.

Mile Northeast Extension

Hantho-Nelson Inc.'s J. B. Moore 1, William Clinton Survey, about 1 mile northeast of Branyon and approximately the same distance southwest of Buchanan production, pumped 23 barrels of oil per hour at 2270 feet, top of the Austin chalk being logged at 1953 feet. On trend, northeast of Buchanan, several rather important short extensions have resulted from completions of the last few weeks.

Ramona Oil Company's M.s. Katie Lay 3, northeastern portion of South Darst Creek field, Guadalupe County, is the largest chalk producer so far completed in that area. It flowed 250 barrels of oil the first 3 hours through open tubing, the production coming from Austin chalk at 2292-2382 feet. The flow was natural.

New Wildcats Started

As a result of the excellent chalk shows, development in the wildcat areas continues to mount. Numerous new locations have been staked and wells started along trend with known faults and in the vicinity of tests which, originally drilled to Edwards limestone, had showings in the chalk section.

Down in Dimmitt County, Wilcox Oil & Gas Company's Light Ranch 1, first of a series of four deep tests, had progressed to 7930 feet.

Pearsall district, Frio County, was still in the throes of fishing jobs. Halff & Oppenheimer 1 of Amerada Petroleum Corporation was still cleaning out after plugging back to 5850 feet, while Halff & Oppenheimer 8 had cut out practically all of the drill pipe stuck at 10,341 feet. D. D. Harrigan 1, which had a fishing job for several days, finally cleared the hole and plugged back to test in the Austin chalk. In the northwestern portion of the county, Pagenkopf & Jamieson's Blackaller Estate 1 was drilling in Del Rio Clay at 2776 feet, Austin chalk having been topped at 2467 feet.

Wilcox Oil & Gas Company's Gilliam, discovery well of an Edwards limestone field in northeastern Zavalla County, was reworked and casing cemented to cut off water intrusion from above. At last reports it was showing considerable fluid, but would not flow steadily. It likely will be put on pump, the purpose being mainly to agitate the heavy fluid.

Opening new field six miles north of Alta Mesa

Falfurrias, Texas. — Standard Oil Company of Texas was opening its second oil field in Brooks County with preparations being made to complete Mestina Oil & Gas Company 1, Lease 2, about six miles north of Alta Mesa field. The well drilled to 6786 feet, set 7-inch casing at 5295 feet and will be gun perforated at 5220-30 feet. It has had a number of oil and gas sands which are considered to be of sufficient importance to make a producer.

The above wildcat is located 3601 feet south and 2239 feet east of the northwest corner of the B. B. Garcia Tract No. 11 in the R. G. Salinas Survey.

Geologists Visit Asphalt Mine

San Antonio.—A number of geologists and independent operators attended the South Texas Geological Society's field trip into the Uvalde asphalt mine area July 3. The tour included a detailed study of the asphalt deposit in the limestone under the direction of J. B. Smyth, of the mining concern, and F. M. Getzendaner, geologist with the Humble Oil & Refining Company.

SOUTH TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
SAN ANTONIO DISTRICT		
BEXAR COUNTY—		
Carter & Ingersoll, Louis Mann 1, 180 ft sl, 220 ft wl 83.25-ac tr, Stephen Jett sur No. 53	*	1357
BLANCO COUNTY—		
E. L. Nizon, H. Hohenberger 2, 310 ft el, 1200 ft nl Adolph Jonas sur No. 723	*	1216
CALDWELL COUNTY—		
Charlotte Oil Co., W. C. Damareau 1, Dillard Cooper sur (Branyon)	*	lcn.
Koenig Oil Co., W. J. Tiller 10, John Henry sur (Luling)	150	2113
Lanning & Coffield, C. B. Corder 3, John A. Neill sur (Branyon)	448	2214
Millican & Norman, Willie Lee Talbert 2, John Henry sur (Luling)	177	2103
Sherman Nelson, J. B. Moore 1, Wm. Clinton sur (Buchanan)	750	2270
Richardson Pet. Co., Patterson 1, 660 ft sel, 450 ft nel of 106-ac tr in Wm. Pettus sur A-21	*	780
B. F. Robinson, J. M. Young (Clark) 2, J. R. Miller sur (Branyon)	102	2180
Rosita Oil Co., Lockhart State Bank 1, 150 ft sel and nel of 25-ac tr and John Roe sur (Branyon)	792	2204
Spokane-Oklahoma Oil & Gas Co., Ed Starke 2, C. Crenshaw sur (Larremore)	37	1280
GUADALUPE COUNTY—		
Felmont Oil Corp., Lizzie Schuenaman 2, Green Dewitt sur (Zoboroski)	96	2504
LAREDO DISTRICT		
DUVAL COUNTY—		
Cox & Hamon, Yoakum-Green 6-A, sur 118 (Hoffman)	124	2726
N. V. Duncan, Worden-Drought 10, sur 151 (Charamousca)	50	1524
Government Wells Oil Co., Inc., H. A. Lundell 2, 1650 ft nl and el of sec 140 (Lundell)	1104	1528
Hamill & Smith, C. W. Hahl 10-C, sur 63 (Loma Novia)	42	2580
Humble, Dowdy-Fee 19, BS&F sur (Seven Sisters)	582	2561
Magnolia, W. Benavides 2, sur 172, (Cole-O'Hern)	*	3150
F. Weil et al 1, sur 565, 990 ft sel, 990 ft nel sur 565 (Sarnosa)	*	4073
John J. O'Hern, S. Beanavides 6-C, blk 24, O'Hern & Seacord subd (Cole-O'Hern)	1248	2839
Geo. Parr Oil Co., F. Vaello Puig 6, San Andres gr (North Sweden)	356	4808
Pan American, J. F. Welder Heirs 5-A, sur 381 (Seven Sisters)	192	2555
Reynosa Oil Co., F. G. Wilson 2, sec 9 Sweden sub (North Sweden)	392	4766
Benedum and Trees, F. Vaello Puig, San Andres gr (North Sweden)	400	4766
Standard Oil Co. of Kansas, Atlee Parr 1, 330 ft nl and wl of 80-ac lse San Andres gr (N. Sweden)	530	4747
McMULLEN COUNTY—		
Edwin M. Jones, Harry Ezzell 5, 330 ft nl and el of sw¼ of nw¼ of sec 39, H. M. Brewer (Ezzell Ranch)	*	3108
WEBB COUNTY—		
Bridwell Oil Co., S. Benavides 1, 2310 ft nl, 990 ft wl sec 691 (Cole-Bruni)	*	3610
Highland Oil Co., A. M. Bruni 2-B, blks 7 and 8, Foltz sub, Maria Arispe gr (Cole-Bruni)	*	3440
C. H. Lewis, A. Lopez 10, sur 110 (Lopez)	780	2297
Eugene Mays, D. G. Garcia 2, sur 786 (Killam)	*	2446
Perkins, Cullum & Achning, Louisa R. de Garza 1, 2310 ft sl, 1650 ft sur 711	*	2710
ZAPATA COUNTY—		
Gilcrease Oil Co., Antonio Trevino 2, center blk 12, sec 8 Bode sub and replat parts, por. 2 and 3	*	2150
Nordan & Morris, C. Bustamante 27, sh 33, Fansler Part., Comitas gr (Escobas)	30	1186
Starr Dev. Co., Paula V. de Garza 1, 660 ft nwl and nel blk 34, C. A. Douglas sub, Zorro Ranch, Zorro Pasture, Comitas gr (Escobas)	*	1865
The Texas Co., Whitehead 101, Cerrito Blanco gr (Escobas)	50	1247
CORPUS CHRISTI DISTRICT		
ARANSAS COUNTY—		
Landreth Prod. Co., McCampbell Ranch 3-A, lot 1, blk 40, T. P. McCampbell subd (McCampbell)	250	7119
BEE COUNTY—		
El Toro Oil Co., Willie S. Robertson 2, Thos. B. Barton sur (Plummer)	*	3112
CALHOUN COUNTY—		
Humble & Plymouth, E. H. Welder 1, M. Rios sur (Heyser)	540	5456
P. H. Welder 15-B, A. Sisneros sur (Heyser)	545	5495
CAMERON COUNTY—		
Saxet Prod. Co. & A. W. Phillips, Port Isabel et al 1, 15 mi s Stapper, 10 mi ne of Brownsville, 880 ft n of Loma Alta Lake and 330 ft el of sh 29, Espiritu Santo gr	*	lcn.
GOLIAD COUNTY—		
Brown & Wheeler, Inc., J. R. Kauffman 1-D, 330 ft nel, 1400 ft sel 150 ac lse P. Trevino sur (Hords Creek)	*	4554
JIM WELLS COUNTY—		
Tsesmelis & Reese, Martha Earhart 1, 330 ft westerly wl and 330 ft from the northerly sl of a 373.3-ac tr in John Suggs sur, ab 447	¶40	4005
LIVE OAK COUNTY—		
Loma Oil Co., Schwartz 1, 3000 ft wl of tr, 415 ft s of Three Rivers-Oakville rd	*	1675
NUECES COUNTY—		
I. J. Allen & Seaboard Oil Co., J. O. Chapman et al 6, sec 38 (Chapman Ranch)	*	6608
Mills Bennett, William Heuermann 1, 330 ft el, 990 ft nl of C. Land sur 408	*	6403
J. K. Culton, I. M. Singer 1, 660 ft nel 330 ft sel lot 13, blk 39 Flour Bluff and Encinal Garden Tracts (Flour Bluff)	*	7010
Genro Drilling Co., Fee 1, lots 1 and 2, blk E in Harbor View addition (Saxet Heights)	77	4076
Rose 1, lot 9, blk 11, Villa Gardens sur (Saxet Heights)	200	4094
Houston Oil Co., Rand Morgan 23, H. Villareal gr (Saxet)	305	4425
Humble & Barnsdall, L. A. Bracht & L. M. Well 1, lot 7, blk 44, Flour Bluff and Encinal Garden tr (Flour Bluff)	752	6661
J. H. Downie et al 1, lot 18, blk 48 (Flour Bluff)	480	6664
F. G. & Kate Ritter et al 2, lot 16, blk 55 (Flour Bluff)	480	6654
Sechrist & Brett et al 1, lot 2, blk 48 (Flour Bluff)	736	6662
T. P. Morgan & Chapman Minerals, Morgan1Clark 7, sur 405 (Saxet)	129	6765
Shell, Ed Flato 5, blk 3 (Saxet)	558	4545
United Prod. Corp., W. H. Harvey 1, 1100 ft e and 1000 ft s of most n'ly w'ly cor 162.34 ac tr, Garcia sur (Agua Dulce)	*	9002
REFUGIO COUNTY—		
Hewitt & Dougherty, M. F. Lambert 49, blk 52, Swisher sur (Tomoconnor)	1830	5905
M. F. Lambert 50, J. M. Swisher sur (Tomoconnor)	1935	5905
Nordan & Morris, Tom O'Conner 9, James Hewitson sur (Tomoconnor)	1686	5915
VICTORIA COUNTY—		
Magnolia, Charlie Sklar 9, blk 8, S. A. & M. G. sur No. 7 (Placedo)	284	4777

*Failures; †Junked; ¶Million cu. ft. gas.

TEXAS GULF COAST

Wildcat at Friendswood looks like field opener.

* * *

Hastings extended north, south, east and west.

Houston.—Several futile exploratory efforts have been made in the general neighborhood of Friendswood in the past, but it looks as though Humble Oil & Refining Company's Settegast 1, washing in late July 9, will remove Friendswood from the list of prospects and put it among proven crude reserves.

The wildcat had cored 189 feet of sand showing oil before reaching bottom at 6040 feet. It plugged back to 6009 feet and set 7-inch casing at 5802 feet to test the Frio sand, the top of which was logged at 5811 feet. Settegast 1 is in the Perry & Austin Survey of Harris County.

Prices for leases and royalty have reached a new high in the Friendswood area. It is reported that several leases have brought as high as $5000 per acre and that royalty is bringing $1000 per acre base. It is believed that this is the highest price ever paid for acreage and royalty in any area in the Gulf Coast in wildcat territory before the discovery well was producing oil.

Probably the reason that acreage and royalty are so high is that the wildcat is so near Hastings, Brazoria County. It is only three miles northeast of the prolific Hastings field, which has an average sand thickness of 800 feet.

Four Hastings Extensions

Hastings was extended south, east, west and north last week. The largest was a mile extension to the south effected by Stanolind Oil & Gas Company's Moore C-1, R. A. MaGee Survey. Sand was logged from 5974 to 6080 feet. Casing has been set and a production test will be made next week. East of production, Humble Oil & Refining Company completed F. W. Knaak 1, Perry & Austin Survey, flowing 180 barrels of pipe line oil daily through ¼-inch choke, with tubing pressure of 200 pounds and casing pressure of 30 pounds from Frio sands at 6095 to 6111 feet. Casing was cemented at 6095 feet. One location west of production, Humble's Shindler 1, H&TB Section 30, was completed at 5995 feet for 650 barrels daily through ¼-inch choke. On the north side of Hastings, Stanolind Oil & Gas Company's W. B. Thornton 1, H&TB Section 29, has made 629 barrels daily through ¼-inch choke, with tubing pressure of 840 pounds and casing pressure of 910 pounds at 6080 feet.

The fourth failure for Hastings is Stanolind Oil & Gas Company's W. H. Avitts A-4, ACH&B No. 1. The hole was drilled to 6146 feet in water sand. A little over two years old, the field has had approximately 218 wells drilled; 212 were oil wells, 2 gas, and 4 failures. It is a remarkable record for a field that old to have only 4 wells abandoned and not to be definitely defined in any direction.

First Gas Well At Turtle Bay

The first gas well to be completed at Turtle Bay field, Chambers County, is Sun Oil Company's Chambers 4, 1173 feet north of Chambers 1, M. A. Carroll Survey. The well made 1,500,000 cubic feet of gas daily through a quarter-inch choke, with a tubing pressure of 2150 pounds and a casing pressure of 2450 pounds from 6585 feet. Top of the sand showing oil was logged at 6573 feet, and seven-inch casing was cemented at 6563 feet. Sun Oil Company has made location for Chambers 5.

Approximately 2½ miles southwest of production at Seabreeze, Chambers County, Sun Oil Company's F. Jackson 1, A. Yorbo Survey, Abstract 36, was running an electrical logging device to 8570 feet after encountering a broken formation showing gas.

Two miles southeast of production at Anahuac, Humble Oil & Refining Company apparently has drilled a dry hole in Middleton 1-C, H. & T. B. Section 110. The well was down to 7429 feet in shale with streaks of sand and has evidently missed the 7080-foot producing sand found at Anahuac. The company recently drilled a dry hole 1½ miles east of Anahuac field. It is believed the company drilled the two extension wells to keep from paying unnecessary rentals.

On the northeast side of Anahuac, Gulf Oil Corporation completed R. Pommer 2, G. W. Morseman Survey, flowing 30 barrels of pipe line oil per hour through a quarter-inch choke from Frio sands at 7120 feet.

Northwest of Anahuac field, David B. MacDaniels made location for E. S. Barrow 1, 466 feet from the east line and 1400 feet from the south line on a 49.3-acre tract in the Luke Bryan Survey. The well is south of South Oil Corporation's White 1, which cored around 300 feet of sand before it was abandoned. Some are of the opinion that David B. MacDaniels' wildcat stands a good chance of becoming a producer.

Well Enlarges West Beaumont

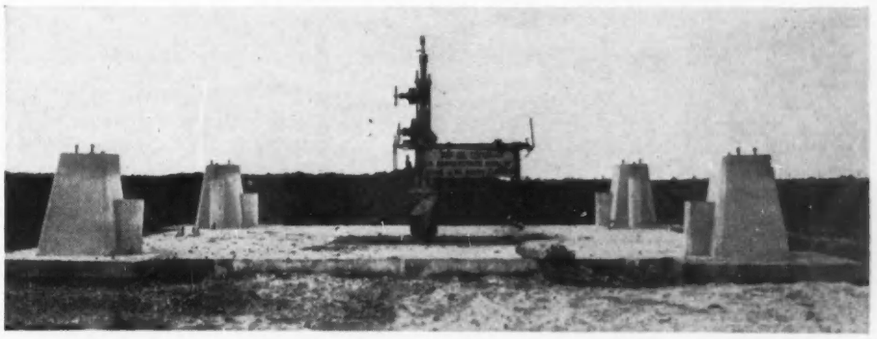
West Beaumont field was extended approximately 1200 feet west when Sun Oil Company's Gailey 1, A. Houston Survey, cored sand showing oil from 5418 to 5421 feet and, after setting seven-inch casing, perforated with 10 shots. At the close of the week the crew was running screen and liner for a test. The hole was drilled to 5424 feet. If the well is a producer it will be Sun Oil Company's first in the West Beaumont field.

Nome Defined On North

Nome field, Jefferson County, was defined on the north when Sun Oil Company abandoned W. T. Tindall 1, A. Horton Survey, at 6738 feet after coring salt water sand at 6073 to 6291 feet. In the Labelle area, Jefferson County, the same company was waiting on cement to set in J. Ward Estate 1, 933 feet south of Broussard 2. Seven-inch casing was cemented at 9951 feet, being one of the longest strings of that size casing ever set in the Texas Gulf Coast. Casing may be perforated from 8319 to 8324 feet, or 8562 to 8598 feet, where sands showing oil and gas were cored.

Two new wildcat locations were announced in Harris County last week. West Production Company's A. Underwood 1 is 2422 feet west and 450 feet south of the northeast corner of Block 561 of the Clopper subdivision in the N. Clopper Survey, Abstract 195, approximately five miles northwest of La Porte, on the Deer Park prospect. In the Cedar Bayou area, Harris County, George Anderson et al's Fisher 1, 2310 feet west of the east line and 330 feet north of the south line of the J. F. Fisher 176.5-acre tract in the John Jams Survey.

Harris & Abercrombie will have to



Christmas tree on Sun Oil Company's Paggi 3, Nome field, Jefferson County

drill 1000 feet deeper in Bernard River Land & Development Company 4 before it establishes a new depth record for the Texas Gulf Coast. At the end of the week this Old Ocean test was down to 10,612 feet in shale and sand showing oil and gas. The well has cored broken formations from 9900 feet to the bottom of the hole. The well will continue drilling.

Location for Danbury

At the old Danbury field, Brazoria County, Rowan Drilling Company announced location for Jamison 1, 330 feet out of the northeast corner of the southeast half of the lease in the H. Austin Survey. Several major oil companies have contributed bottom-hole money to the wildcat.

Arcolla prospect, Fort Bend County, proved disappointing last week when Schwab & Gem Oil Company cored salt water sand in Frio formation in Arcolla Sugar Mills 1. The well was abandoned at 6540 feet after coring the water sand from 6231 to 6250 feet. Frio was topped at 6231 feet.

Magnet field, Wharton County, apparently, was extended northwest when Humble Oil & Refining Company cored oil sand in Cockburn Fee 1, J. Castleman Survey. The well logged gas sand from 5500 to 5525 feet and oil sand from 5525 to 5550 feet. At the end of the week the company was running an electrical logging device and will probably set casing.

South of production at Palacios, Matagorda County, Sun Oil Company's Bayshore Farms 1, L. Goodwin Survey, was drilling at 7849 feet in shale after coring sandy shale showing gas. The well attempted to blow out during the week when a gas and distillate sand was cored at 7647 feet, but was brought under control and another gas sand was logged at 7760 feet.

TEXAS GULF COAST
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
AMELIA—		
Humble, Crook 3	552	6786
Langham 5	641	6777
Quinn 5	624	6778
Tyrell Combest 11	*	6872
ANAHUAC—		
Gulf, Pommer 2	720	7120
Humble, Grippon 8	551	7095
Johnson 9	706	7085
BARBERS HILL—		
Texas Gulf, Barber A-7	17	5397
BLUE RIDGE—		
H. H. Hoffman, Lee 1	56	4013
Superior, West & Schenck 4	25	3076
BOLING—		
Gulf, Chase 14	28	761
DICKINSON—		
Bennett & Kenyon, Way 2	*	8194
Pure, Schelor 2-B	297	8120
FANNETT—		
Gulf, Thomas 19	233	4299
HASTINGS—		
Humble, Brown A-13	643	6070
Knaak 1	180	6111
Shindler 1	650	5995
So. Texas Grain Co. 1	612	6080
Stanolind, W. H. Avitts A-4	*	6146
M. Condon 2	652	6080
F. Drake 10	669	6080
S. Paul 10	656	6080
S. Paul 11	631	6080
Thornton 1	629	6080
HULL—		
W. B. Flynn, Abel 22	35	450
HUMBLE—		
Texas Co., Koehler 40	240	3476
LOUISE—		
Pure, Houston 4	504	5150
MANVEL—		
Texas Co., HOFA 30	518	5690
NOME—		
Sun, W. T. Tindall 1	*	6738
ORCHARD—		
Gulf, Moore 52	430	4125
PIERCE JUNCTION—		
Hamil & Smith, Bullock 1	325	4680
SEGNO—		
Humble, Kirby 4-B	484	5336
La Quinta Oil Co., Wing 4	213	5194
SILSBEE—		
Humble, Kirby 1	240	6986
TURTLE BAY—		
Sun, Chambers 4	1½	6585
WEST BEAUMONT—		
Glenn H. McCarthy, Longe A-3	456	5401
AUSTIN COUNTY—		
Temple Hargrove & Cockburn, Bartay 1, w of Bellville, M. Steusy sur	*	4004
FT. BEND COUNTY—		
Gem Oil Co. & Schwab, Arcolla Sugar Mill 1, Arcolla prospect, D. Fitzgerald sur	*	6540
MONTGOMERY COUNTY—		
Texas Co., Crawford 1, Willis prospect, U. Springer sur	*	4620
SAN JACINTO COUNTY—		
Cockburn et al, Whitten Estate, Keno prospect, Wm. West sur	*	5610

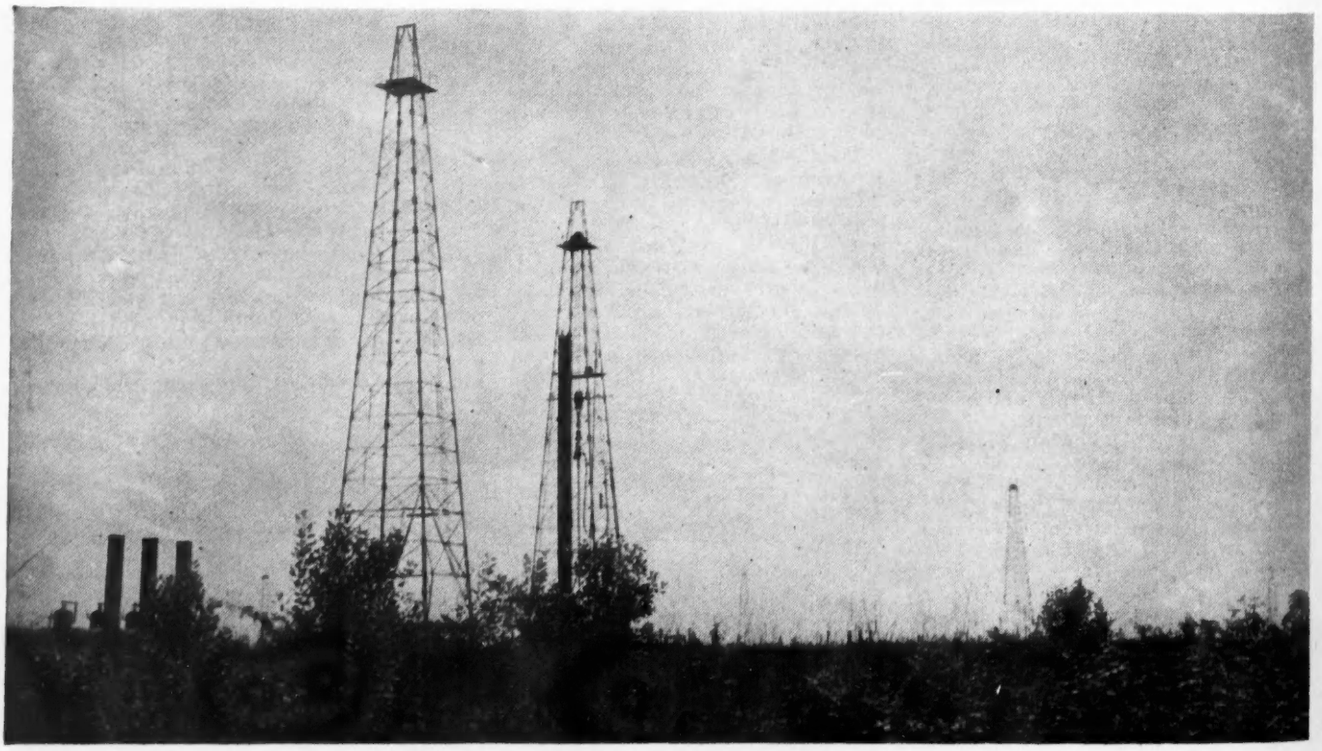
*Failures; †Junked; ¶Million cu. ft. gas.

ALBERTA PRODUCTION

Production of crude oil in the Province of Alberta, Canada, during May totaled 175,997 barrels, according to word received from C. W. Dingman, director of the petroleum and natural gas division of the department of lands and mines of Alberta.

Alberta's May production was divided as follows: Turner Valley limestone production, 172,907 barrels; Turner Valley shallow production, 765 barrels; Red Coulee light crude, 1211 barrels, and Wainwright heavy crude, 1114 barrels.

June and July production figures from Turner Valley, which constitutes Alberta's main source of oil, are expected to be much higher than those for any of the five earlier months of the year due to new completions and to the recent application of acidization in the field.

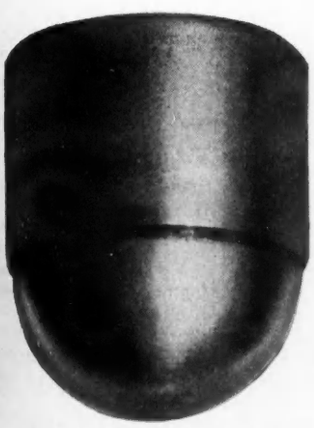


View of Jeanerett field, St. Mary Parish, South Louisiana

STEEL 5 DAYS

This steel valve taken from service in a sour crude area in west Texas lasted only 5 days. Corrosion comes from oil, hydrogen sulphide, and brine.

Soon eats the face off the average valve . . . but look at the record of "K" MONEL



Photographs: Courtesy of Jon R. Long, Mfr., Fort Worth, Texas

"K" MONEL 14 MONTHS

Unretouched photograph of a "K" Monel (KA-Alloy) valve drop after 14 months' service in a wet tubing job, Phillips No. 1, Baker, Glascock County, Texas. This is in the same general area where the steel ball shown above gave only 5 days' service.

IN the heart of the West Texas area — sour crudes through corrosion and abrasion eat and grind away in no time at all anything but the one superior valve metal. For instance:

A common steel ball and seat lasts about twenty days. Some give out in 48 hours. The ordinary alloy steel ball and seat is usually good for about forty-five days.

But "K" Monel* really works!

For a ball and seat or drop and seat of "K" Monel has *ten times the life* or even more, depending on locality. Since December 1932 "K" Monel valves have been proving their worth. A life of two years is common. And in one of the most corrosive wells in the Permian Basin —where the life of a steel ball doesn't usually exceed five days —"K" Monel working valves ran for upwards of 14 months.

To resist corrosion and abrasion in corrosive areas, "K" Monel, a heat-treatable grade of Monel, makes the most effective drop and seat and ball and seat yet developed.

If you would like technical data, write for bulletin T-9, "Engineering Properties of 'K' Monel".

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street • New York, N. Y.

INCO MONEL

* "K" Monel is a registered trade-mark applied to a nickel alloy containing approximately two-thirds nickel and one-third copper with small amounts of aluminum which make it susceptible to hardening by heat treatment.

SOUTH LOUISIANA

Venice wildcat cores oil sand at 7180 feet.

* * *

Lake Peigneur test will try again for production.

* * *

Drilling deeper on North Crowley discovery test.

Lake Charles.—Interest in the Louisiana Gulf Coast the past week centered on four wildcats. Two have set casing on top of oil sand and will be ready for production tests the coming week; two made tests last week and showed gas and salt water, but are continuing drilling.

Probably the most important wildcat of the four mentioned above is Tide Water Associated Oil Company's Manhatten Fruit Company 3, east side of Venice dome, Plaquemines Parish, which cored sand showing oil from 7180 to 7208 feet and set 7-inch casing for a production test. If the well is a commercial producer it will be the first for Venice salt dome.

Tide Water Associated Oil Company has drilled three wells on Venice dome. Each has shown oil and gas, but the last test is the only one to have cored enough saturated sand for a production test. The company leased over 10,000 acres in the district and worked it with geophysical instruments.

Watch Lake Peigneur Again

The second wildcat to attract attention in the South Louisiana district is Jefferson Lake Oil Company's Lake Peigneur 414, Jefferson Island dome, 12s-5e, Iberia Parish. The well was down to 7069 feet and 5-inch casing was cemented. The company will probably perforate the casing for a production test next week. If the well is a commercial producer it will be the first for this area and also will be the first for the five salt domes which lie in a trend in this district. If the well produces, the other four salt domes will receive a play.

Lake Peigneur 414 has cored broken formations showing oil from 6500 feet to the bottom. A production test on the wildcat at 6945 feet some time ago failed to produce oil in commercial quantities. It was plugged back several times before it reached the present depth.

Discovery Well Drilling

Although Humble Oil & Refining Company's Federal Land Bank 1, North Crowley prospect, Section 34-8s-1e, Acadia Parish, has already indicated it would open a new oil field in the Louisiana Gulf Coast, it is attracting attention with every foot the crew drills. Last week a drill stem test was made from 8234 to 8253 feet and showed 25 stands of salt water with a show of gas and a trace of oil in 20 minutes through ¼-inch chokes on top and bottom of the testing tool. At last report the wildcat was below 8353 feet in shale. The well indicated it would open a new oil field when a drill stem test from 8086 to 8106 feet showed 1170 feet of pipe line oil and 180 feet of oily mud in 11 minutes through ¼-inch chokes. Instead of making a production test at this depth the company decided to go deeper. If no new sands are encountered the test will perforate the saturated oil sands.

Fenton Wildcat Plugs Back

The fourth important wildcat in the district is Louisiana Crusaders Oil Company's Langley 1, Fenton area, Section 36-7s-5w, Jefferson Davis Parish. After perforating casing from 7358 to 7364 feet with 10 shots and showing salt water, the well has been plugged back to test sands at 6555 to 6575 feet. After perforating the casing at the 7364-foot sand, a 30-minute drill stem test showed 75 stands of mud and salt water with a good blow of gas. The well showed a pressure of 14 pounds. The 6575-foot sand will be the third sand tested. So far all sands have shown salt water and gas.

Abandon Two at St. Martinville

Northwest of production at St. Martinville, St. Martin Parish, Tide Water Associated Oil Company abandoned two wells. The Smedes 1-C was abandoned at 9645 feet in heaving shale and is the deepest test ever drilled at St. Martinville. Smedes 4, Section 57-11s-6e, missed the regular producing sand at 5580 feet and was abandoned at 6894 feet.

After showing salt water in the 8430-foot sand, southeast of production at Charenton field, St. Mary Parish, Pan American Production Company was plugging South Coast Corporation 1 back to test the 7900-foot sand. Last week casing perforated from 8424 to 8430 feet in 30 minutes showed 72 stands of fluid, the top three stands being mud and the balance salt water.

Approximately 800 feet north of the discovery well at Gibson, Terrebonne Parish, Shell Petroleum Corporation was preparing to make a drill stem test from 8641 to 8654 feet of a new sand found in Realty Operators 2-B, Section 18-17s-15e. Sand showing gas was logged at 8629 feet and sand showing oil was topped at 8641 feet. The hole is bottomed at 8654 feet in sand showing oil. The discovery well is producing from Miocene sands at 9461 to 9493 feet. Shell Petroleum Corporation's Pelican 1, Section 35-17s-15e, was shut down at 10,325 feet repairing rig after it attempted to blow out.

One mile south of production at Tepetate, Acadia Parish, Continental Oil Company abandoned J. Guillory 1, Section 34-7s-2w, at 8627 feet after missing the regular producing sand.

Approximately 1000 feet east of the discovery well at Abbeville, Vermilion Parish, Continental Oil Company's Brookshire 1, Section 66-12s-3e, was drilling in shale at 8498 feet after missing the 7666-foot productive sand found in Hebert 1, the discovery well.

SOUTH LOUISIANA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
GILLIS—		
Union Sulphur, Barbee 15	436	6724
JEANERETTE—		
Herton Oil Co., Carter 7	*	8011
JENNINGS—		
Lake City Oil Co., Jennings Heywood 3	*	4234
LEEVILLE—		
Texas Co., L. L. E. Leeville 54	193	4145
ST. MARTINVILLE—		
Tide Water Associated, Smedes 1-C	*	9645
Smedes 4	*	6894
TEPETATE—		
Continental, Guillory 1	*	8622

*Failures; †Junked; ¶Million cu. ft. gas.

Lease buyers forced to go farther afield for holdings

Shreveport.—With practically every large tract in the North Louisiana Basin that has shown any promise of producing possibilities either solidly blocked or at least "checkerboarded," companies seeking large wildcat blocks have had to go farther afield either into the "trend" area of central Louisiana or east of the Monroe Uplift, or buy from someone who already has leased the acreage.

East of the Monroe uplift and located partly in the parishes of Franklin, Madison, Richland and Tensas, Continental Oil Company has taken an option on a solid block of 85,000 acres owned by the Singer Sewing Machine Company. This block has been sought after by several in recent months.

Active West of Uplift

Leasing and geophysical activity west of the Monroe uplift as sequel to the Schuler discovery in Arkansas remains high. Gulf Oil Corporation is leasing available tracts in Union Parish in Townships 20, 21, and 23 north, Ranges 2 and 3 west. Magnolia Petroleum Company has had a shooting unit working recently in Townships 20 and 21 north, Range 1 west of the same parish.

The Hunter Company which has had a block under lease in this parish for several months, the acreage centering around Section 9-22n-2w, is planning an early test thereon.

Magnolia Petroleum Company and Tide Water Associated Oil Company are taking scattered leases around the flanks of the Cotton Valley field, Webster Parish, especially in Townships 20 and 21 north, Range 9 west.

NORTH LOUISIANA

Deep Rodessa well drills into Permian salt.

* * *

DeSoto Parish wildcat producing steadily.

* * *

Rodessa-in-Arkansas well given acid treatment.

Shreveport.—W. L. McClanahan and associates' Capps 1, NE SW 11-20-28, Miller County, Arkansas, that extended the Gloyd producing horizon of Rodessa into Arkansas, went "dead" last week and had to be acidized with 3000 gallons of acid before being revived.

The well had been averaging over 450 barrels daily since its completion flowing through a crack in the gate valve. When tubing was run it ceased to flow and acid was resorted to. A clogged tubing was blamed for the well's behavior.

However, on Thursday, July 8, the well was flowing consistently again at the rate of 28 barrels hourly after being swabbed in again the preceding day. Earlier Wednesday the well had flowed 65 barrels of oil per hour through ⅜-inch tubing choke with casing pressure of 650 pounds.

Four tests are drilling across the Arkansas line in the vicinity of this well, eight others are rigging up and 17 locations have been made with permits issued for 23 tests there.

In the northeast part of the Rodessa field in Louisiana, Blackwell Oil & Gas Company was drilling lime at 7020 feet, in Neugent 3, Section 8-23n-15w, after logging top of the Petitt horizon (basal Glen Rose) at 6651 feet.

Arkansas promises control of Rodessa extension area

Texarkana, Ark.—O. C. Bailey, chairman of the Arkansas Board of Conservation, promised approximately 50 oil men who met informally at Texarkana July 7 to discuss problems of the Rodessa field extension into Miller County, Arkansas, that the extension area would be developed in an orderly and sane manner.

Although no rules were adopted at the conference, it was indicated that regulations affecting the Schuler field will be largely followed in the Miller County extension area. The 10-acre space rule is being followed in both fields, but special permits have been issued for smaller tracts.

Casing rules followed in Schuler are for at least 100 feet of surface casing 2000 feet for second string, and final string must be cemented within 3000 feet of the top of the hole.

Freeman W. Burford, who has made several of the new locations for the new Miller area, attended the session and plead for "development of the field along modern and scientific lines." He declared that personally he favored "a minimum number of wells to bring the maximum amount of oil from the ground. In this way you will maintain a stabilized price on your oil lands and royalties and prolong the life of the field."

W. M. Phillips, oil company attorney, urged prevention of excessive drilling, pointing to the overdrilling on the Louisiana side of Rodessa in the early days of the field and the consequences thereof. He urged that immediate action be taken before it is too late. C. Rae of Skelly Oil Company urged 1 well to each 40 acres. Joe Orr, attorney for W. L. McClanahan who completed the Miller extension well, attended as an observer. Jack Steel, of the federal tender board at Kilgore, Texas, attended as representative of the Department of the Interior and recalled some of the experiences of East Texas field operators. He suggested a "sensible exploration" of the newly-opened territory.

Among others attending were W. M. Layton of New York, who several months ago took out several permits for the new Miller County area; Bert Larry, oil firm attorney; C. E. Harris, executive head of the Arkansas Board of Conservation, and others.

Marion County well flows 30 barrels hour

Shreveport.—The Lodi offshoot of the Rodessa field in Marion County, Texas, 8½ miles southwest of the field proper and nearly six miles northeast of the lone oil producer near Jefferson, Texas, added an oil well and a gas well last week.

The Hunter Company's E. W. Fonda 2, A. de los Santos Coy Survey, located 632 feet northwest of the same company's E. W. Fonda 1, completed several weeks ago as the first oil producer in that area, was completed in the Gloyd horizon flowing 30 barrels per hour through 7/16-inch choke from 6095 feet. Casing pressure was 200 pounds and tubing pressure 150 pounds. The testing of the well was marred by an accident when a gas line blew out killing three spectators.

In the Thomas Hansen Survey, Marion County, Arkansas-Louisiana Gas Company's C. C. Braden 1, that went to 6870 feet into the Petitt horizon and was plugged back to 5972 feet, was completed as an estimated 40 to 50 million-foot gasser, although it made only 5,010,000 cubic feet of gas daily through ¼-inch choke, with tubing pressure 275 pounds and casing pressure 2200 pounds.

In the A. de los Santos Coy Survey, the same company last week was testing Allen Houston 1, at 6076 feet. This test which logged 36 feet of saturated Coquina lime at bottom of the hole, checked 14 feet higher on top of the saturation than did Hunter Company's E. W. Fonda 1.

One mile northwest of Braden 1, Arkansas-Louisiana Gas Company made location for R. W. Wood 1, center of an 80-acre tract in the J. C. Eaton Survey, Marion County.

Rodessa two years old as oil field

Shreveport.—The Rodessa field celebrates its second birthday as an oil field on July 12, it being that date in 1935 when United Gas Public Service Company's I. L. Young 1, SE SE 21-23n-16w, Caddo Parish, was completed as the field's first oil well. It was in August, 1930, that R. W. Norton completed Hill 1, Section 33-23n-16w, at 5512 feet as a 12,000,000-foot gasser, the first well of the field.

To July 1 the field has produced 29,506,248 barrels from 383 wells on the Louisiana side and 10,377,771 barrels from 307 wells on the Texas side of the field. One well has been completed in Arkansas.

Daily average production of the field is 88,948 barrels, of which 49,895 barrels is from the Louisiana side and 38,770 barrels from Texas.

The field has approximately 12,000 acres of potentially productive territory and the southwest and northwest limits apparently have not been defined, with possibility that it may yet be extended farther to the northeast.

Deepest North Louisiana test gets Permian salt

Shreveport.—The first test ever to reach the Permian salt in North Louisiana was R. W. Norton's Payne 1, SE SE 27-23n-16w, south of the Rodessa fault in the Rodessa field, Caddo Parish.

This test, the deepest ever drilled in North Louisiana, Arkansas, or East Texas, logged top of the Permian salt at 11,470 feet; elevation is 231 feet. Total depth was 11,486 feet and the test was plugged back to 10,600 feet. Norton originally set 10,000 feet for this test and later set 12,000 feet as his goal.

While the log of the well has been jealously guarded it is reported to have had several interesting showings in the lower Marine horizon which produces gas and distillate below 8000 feet in Cotton Valley field, Webster Parish.

Norton is the discoverer of the Rodessa field having completed the first gas well there early in August, 1930.

Completion revives interest in south end of Sabine Uplift

Shreveport.—Interest on the south end of the Sabine Uplift, which has been comparatively quiet in recent months with the North Louisiana Basin holding the center of attention, has been considerably revived by completion of Pullman Oil Company's Ramsey A-1, SE NW 36-11n-11w, DeSoto Parish. This well, with 30 feet of saturation reported in the Paluxy at total depth of 2961 feet, was completed last week flowing 325 barrels in the first 11½ hours through 1¼-inch choke, without use of tubing. The well flowed 48 barrels in the first half hour. Gravity of the oil is 39.

Three new locations have already been announced for the area, one by the Pullman Oil Company, which is headed by M. J. Grogan.

Until a permanent spacing rule is issued by the minerals division of the Louisiana conservation commission, one well per 10 acres will be permitted conservation officials said.

Performance Consistent

Although some have been inclined to look askance at this well, which is six miles south of the old Bull Bayou field but on a separate structure, the fact that it has continued to produce consistently at the rate of 20 barrels per hour through casing choke of 1¼-inch size appears to prove its consistency.

A new shallow field with plenty of pressure will be welcomed in North Louisiana, where the cry has been for deeper exploration since the discovery of oil at Rodessa.

Magnolia Petroleum Company and The Texas Company, the only two major companies that have shown any great amount of interest in the new area, are leasing north of the new well. The Texas Company already was leasing in Township 12 north, Range 10 west, Red River Parish. In DeSoto Parish, Magnolia has been leasing in Township 12 north, Range 12 west. In the same parish, Sinclair Prairie continues to take scattered leases in Township 11 north, Range 15 west.

Gulf Oil Corporation recently took 1300 acres in Township 16 north, Range 16 west, Caddo Parish.

Lisbon is busy spot with 18 tests drilling

Shreveport.—Eighteen wells are drilling and 17 others are rigging up, moving in materials or listed as "active locations" in the Lisbon field in Claiborne and Lincoln parishes.

Only three wells were completed in the field last week. The most important of these was Magnolia Petroleum Company's S. M. English 2, Section 31-21n-4w, Claiborne Parish, northeast edge test, which logged 23 feet of saturation, the greatest amount so far logged since the discovery well in the field, was completed flowing 832 barrels in 24 hours flowing through a 1-inch choke at 5281 feet. Casing pressure was 220 pounds and tubing pressure 207 pounds.

J. R. Bevill and associates' Alex Edmonds 1, NE NE 16-20n-5w, three miles southwest of production, is reconditioning hole at 5065 feet. On upper markers it is reported checking low as compared to the discovery well of the field.

M. M. Morelock has sold to Sloan & Zook Company the west 320 acres of Section 1-20n-5w, ½-mile west of the discovery well of the field in NE NE 1-20n-5w. A large number of smaller sales are being made constantly in and around Lisbon.

Eight miles southeast of Lisbon, H. D. Easton and Belmont Quadrangle Drilling Company's G. W. Dye 1, NE NE 21-19n-4w, plugged back from 6010 to 4744 feet to test a saturated formation just below this level in the Glen Rose.

Cotton Valley deep test causes crater excitement

Shreveport.—A fight to save Ohio Oil Company's A. J. Hodges 2, NE NW SW 23-21n-10w, Cotton Valley, that had threatened to crater and had caused another nearby test to crater, was successful last week when both tests were killed.

Leaks in both of the 9⅝-inch and the 7-inch casing in Hodges 2 permitting gas from the lower Marine horizon to get into the upper horizons, was blamed for the cratering, which endangered a number of other operations in the field.

The cratered hole was Belchic & Laskey's test in NE SE 22-21n-10w, abandoned at 3700 feet, and tons of gravel and mud were dumped into the crater to kill it. After this well was killed, A. J. Hodges 2, was killed, after crews of nearly every other operation in the field had joined in the fight to halt the cratering.

A. J. Hodges 2 was completed making 470 barrels of distillate and 4,000,000 feet of gas through ⅜-inch tubing choke with casing pressure 3200 pounds and tubing pressure 3100 pounds.

Conservation Commission officials have ordered that all casing set in the Cotton Valley field be joint tested before completion attempts are made.

During the fight on the crater practically every operation in Cotton Valley had been halted.

Pullman Oil Company's Ramsey A-1 added another oil producing spot in North Louisiana last week and revived interest in the south end of the the Sabine Uplift.

Louisiana grants 27 permits for new wells

Shreveport. — Twenty-seven drilling permits were authorized last week by the minerals division, Louisiana conservation commission. Fourteen were for North Louisiana, divided among the following parishes: Caddo, 5, including 3 in Rodessa; Claiborne, 2, both in Lisbon; DeSoto, 2; Lincoln, 3, including 2 for Lisbon; Sabine, 1, Webster, 1. The 13 in south Louisiana were divided among the following parishes: Acadia, 5; Calcasieu, 1; Cameron, 2; Iberia, 1; Plaquemines, 1; St. Mary, 2; Vernon, 1.

ARKANSAS FIELDS

Schuler extension try deeper than field level

El Dorado, Ark.—Alice Sidney Oil Company's Powledge 1, SW SE 7-18-17, ½ mile from nearest production in the Schuler field, Union County, that now has four producing oil wells, apparently missed the first of the producing horizons of the area and last week was preparing to core ahead from 5713 feet for exploration of deeper horizons which showed producing possibilities in Lion Oil Refining Company's Edna Morgan B-1, Section 18-18-17.

Phillips Petroleum Company's M. Justiss 1, Section 18-18-17, west offset to Marine Oil Company's M. Justiss 1, one of the four producing wells of the field, was coring at 5621 feet Thursday for the first of the producing strata.

Schuler has 17 active drilling operations at present, 3 others rigging up and 6 locations.

Standard Oil Company of Louisiana has a shooting unit working in Townships 17 and 18, Ranges 16 and 17 of Union County.

El Dorado, Ark.—Standard Pipe Line Company of Louisiana has surveyed and purchased right-of-way for 6½ miles of pipe line to the new Schuler field, Section 18-18-17, Union County. The proposed line would join with the company's trunk to Baton Rouge, Louisiana.

Lion Oil Refining Company which laid a 6-inch line to its discovery well at Schuler immediately after its completion to provide 14 miles of line to its refinery at El Dorado, is completing another 8-inch welded line between the same points.

NORTH LOUISIANA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO PARISH (Rodessa)—		
J. Edward Jones, Parker 1, 4-23n-16w	50	6027
Surf Oil Co., Sheets 1, 8-23n-16w..	192	6036
United Gas P. S. Co., Pitts 11, 13-23n-16w	144	6038
CLAIBORNE PARISH (Lisbon)—		
Magnolia Pet. Co., S. M. English 2, 31-21n-4w	832	5281
H. E. Patton 2, 36-21n-5w	450	5310
P. W. Woodruff, McDonald B-2, 36-21n-5w	492	5277
CLAIBORNE PARISH (Sugar Creek)—		
United Gas P. S. Co. et al, Caskey 2, 6-19n-5w	¶15	5702
BOSSIER PARISH (Sligo)—		
Ark. La. Gas Co., Werner B-2, 7-17n-11w	¶26	5056
United Gas P. S. Co., S. L. Herold 1, 31-17n-11w	*	5260
S. L. Herold 1, 31-17n-11w	*	5260
DE SOTO PARISH—		
Pullman Oil Co., Ramsey A-1, 36-11n-11w	368	2961

*Failures; †Junked; ¶Million cu. ft. gas.

126 wells in Rodessa are showing salt water

Shreveport.—One hundred and twenty-six wells in the Rodessa field are showing salt water and 11 of these are listed as "dead." Ten of the latter are on the Louisiana side.

Of the wells showing salt water encroachment 101 are on the Louisiana side and 25 on the Texas side. Ten wells in Louisiana showing salt water are being pumped, and two of those on the Texas side showing water are on the beam.

Three of the wells listed as "dead" are in Section 14-23n-16w, which is the most closely drilled of the Rodessa field.

Five of six Arkansas permits for Rodessa

El Dorado.—Six permits to drill were authorized last week by the Arkansas Board of Conservation. Five were for tests in the recently opened Rodessa field extension in Miller County, Arkansas. The other was for a wildcat test in Union County. The five tests in Miller County are: F. W. Burford, 3 permits; A. A. Capps 1, center west half of east half fractional section 14-20-28; J. E. Eason 1, 670 feet north of south line and 330 feet east of west line east half of SW SE 11-20-28; J. E. Eason 2, 495 feet east of west line and 600 feet south of north line of east 30 acres NW SE 11-20-28; K. Hughes, J. N. Thomas 1, 330 feet east of west line and the same distance south of north line NW NW SE 12-20-28; J. N. Thomas 2, the same footage in SW NW SE 12-20-28. The Union County permit was issued to I. J. Langley for K. K. Langley 1, center NW SE NE 1-19-18.

Gulf finishes assembling two big Mississippi blocks

Jackson, Miss.—Gulf Refining Company, which has been one of the most active leasers and explorers in south Mississippi for the last six years, has just completed assembling two large wildcat blocks in Lawrence County, both being long-time commercial leases without drilling obligations. One of the blocks totaling approximately 20,000 acres is in Township 6 north, Range 20 west, and the other about half this size is in Township 7 north, Ranges 10 and 11 west.

Four Crews Working

Four geophysical crews are still working in south Mississippi. Sun Oil Company has two crews, one a torsion balance unit and the other a gravimeter unit, in the southern part of Lamar County, south of the recently discovered salt dome in Township 4 north, Range 15 west. Phillips Petroleum Company has a torsion balance unit working in the southern part of Perry County; and The Texas Company has a seismograph unit in Marion County.

In north central Mississippi, General Geophysical Company has a geophysical crew working in western Holmes County. Petty Geophysical Company has a seismograph unit working in Warren County for Southern Natural Gas Company.

United Gas Public Service Company recently moved two seismograph units into Livingston Parish, Louisiana, just south of the Mississippi state line, one of them having worked for some time in Mobile County, Alabama.

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WELL TOOL & SUPPLY COMPANY

SHREVEPORT, LOUISIANA

Lake Charles—Houma—Converse
New Iberia—Rodessa—Monroe—Cotton
Valley—Turnertown—Greggton—Houston

EASTERN FIELDS

Illinois interest spreading to adjoining states.

* * *

Price increase boosts work in Allegany area.

Pittsburgh, Pa.—Pure Oil Company, with three good producers and four wells drilling in the Clay City field, Clay County, Illinois, last week announced locations for five more tests in the area. All offsets to the company's producers, they are Eugene Weiler 2, 3 and 4, and Bunny Travis 2 and 3. Derricks were being erected on Eugene Weiler 2 and 3 and on Bunny Travis 3 as the week closed.

Down 2525 feet, Pure Oil Company expected production at Bennett Moseley 1 within another 400 feet. Reports of this operator's other drilling tests show Sarah M. Bechtel 1 drilling at 1440 feet, Albert Travis 1 drilling at 750 feet, and Nick Moseley 1 drilling at 700 feet. The crude oil purchasing and pipe line division of the company has completed a private telephone line, the first to be constructed during the present intensive activity in Illinois, from the Bunny Travis farm to Clay City where it connects with the lines of a commercial company.

Damage estimated at $5000 was suffered by fire at Jeff Smith 1, Patoka Township, Marion County, brought in three weeks ago as a 100-barrel producer at 1447 feet. Drilled by George Timberlake, the well is owned by A. J. Hausman and others. Damage was to the rigging and tools which dropped to the bottom of the casing when the cable burned. The blaze started as drillers were removing a bailer with which they had been cleaning the 6-inch tubing. It is believed that a friction spark ignited the oil.

Ohio Oil Company spudded a test on the Palmer farm, 1 mile northwest of Noble, Richland County, scheduled for 3000 feet.

Interest Spreading

Important strikes in the Illinois Basin area have carried interest over to Indiana and Ketnucky. T. Lorin Driscoll, Indianapolis, heads a syndicate which will test the old natural gas district in southeastern Hamilton County, Indiana, for oil. The gas field once supplied Indianapolis with fuel and light.

Scouts of several major companies operating in the Mid-Continent fields have been investigating prospects for deep tests in the vicinity of Owensboro, Kentucky. Independent operators have been active in this area during recent months, but all wells were completed in shallow horizons with production ranging from 1 to 200 barrels. The deeper Corniferous lime and the Silurian formations have been proved to contain oil in this region. Leasing activity on the part of both major companies and independent operators in McLean, Ohio, Daviess, Henderson, Webster and Hancock counties is comparable to that which took place in the Illinois Basin area just preceding the present intensive development program.

The McCloskey sand, from which Pure Oil Company has wells producing in excess of 1000 barrels daily in Clay County, Illinois, contained commercial production when tested in the Utica pool in Kentucky. Companies represented in scouting and leasing activities here recently included Gulf Oil Corporation, Phillips Petroleum Company, Carter Oil Company and The Texas Company.

West Virginia Extension

Glenn Oil & Gas Company extended the Oriskany gas pool of Kanawha County, West Virginia, with its test on the Virginia Joint Stock Land Bank tract, Union District. It is three miles southwest of the gas well on the B. F. Corke farm, Poca District, and gives a large extension to the field. Initial gauge of 250,000 cubic feet was increased to 1,375,000 cubic feet after a shot.

United Fuel Gas Company completed a gas well on the A. J. Bruen lease, Poca District, in this field, which gauged 10,100,000 cubic feet a day. It is bottomed at 5145 feet.

Five tests were completed in the active new Glenville gas field of Gilmer County, West Virginia. Largest was that of Pittsburgh & West Virginia Gas Company on the S. A. Hayes farm which gauged 4,500,000 cubic feet. The same company has a 2,000,000-cubic-foot well on the Hays & King tract, bottomed at 1400 feet. Other completions in the field are by Massey & Jarvis on the Sally Showalters lease, gauging 150,000 cubic feet and bottomed at 1610 feet; Carnegie Natural Gas Company on the Floyd Allen tract, gauging 130,000 cubic feet and bottomed at 600 feet, and Carnegie Natural Gas Company on the D. Despard tract, No. 3 on this lease, bottomed at 1688 feet.

West Virginia completions totaled 19, of which 5 were small producers, 12 were gas wells and 2 were failures.

Potter Development Company's deep test on the H. C. Kemp farm, Farmington Township, Tioga County, on the Pennsylvania side of the New York-Pennsylvania deep-sand gas field, was abandoned when it failed to find production in the Oriskany sand. It was the sole completion in this field.

Four other tests were completed in Pennsylvania. Union Gasoline & Oil Corporation has a 1-barrel producer in No. 6 on the A. O. Vankirk farm, and Equitable Gas Company a 300,000 cubic foot gas well in No. 1 on the Mary Walker farm, both in Washington County. In Allegheny County, small gas wells were completed by O. Miller on the O'Rourke tract and by A. Wally & Company on the Grunder Brothers tract.

Price Boost Increases Work

The recent advance of 15 cents a barrel in the price of crude is responsible for boosting operations in the Allegany oil field of New York to a high peak. A total of 76 wells are drilling. Sloan & Zook interests, with 14 strings operating, are the most active in the field. Sloan & Zook Oil Company has four strings busy on the McDivitt lease at Kossuth and four on the Willets lease at Rock City. Bradford Producing Company, Sloan & Zook subsidiary, has six strings active on Lot 8, Salt Rising district, town of Bolivar.

Other companies now active in the field are: A. C. A. Oil Corporation, 1 test; Oil Corporation, 1; Andrews Brothers, 1; Bradley Producing Corporation, 3; J. H. Bucher & Sons, 1; Chris Oil Company, 1; Crowley Oil Company, 1; Dermitt & Shaner, 2; John Fay, 1; Forest Oil Corporation, 4; N. V. V. Franchot et al, 1; Genesee Oil Company, 1; J. B. Gray Estate, 1; Hardman, Miller & Thompson, 1; Homestead Oil Company, 1; Mac Oil Company, 1; Marsh Oil Company, 2; MacDonnel Oil Company, 1; Messer Oil Corporation, 3; Moore & Repp, 1; Moore Producing Company, 3; R. B. Moore et al, 1; Otto Oil Company, 1; Martin O'Connor Estate, 1; Otsquago Corporation, 2; Petra, Sawyer & Company, 2; Pure Penn Oil Company, 1; Putnam Oil Company, 1; Sage Oil Company, 1; Tress Oil Company, 1; Trio Oil Company, 1; Tapp Oil Company, 1; Underwood, Moody & Groll, 1; Sawnett Oil Company, 1; Vossburg Oil Company, 1; Welch, Rice, Gabriel, Kyser et al, 1; Karl Weller Oil Corporation, 1; S. H. Carrier, 1; Charles Boyd Estate, 3; Duke & Reynolds, 1; Ebenezer Oil Company, 1; M. W. Reynolds, 1; Allentown Oil Company, 2; William McKee, 1; L. E. Norton, 1; Vogan Oil Company, 1.

East Ohio Gas Company completed the largest Ohio producer of the week on the J. A. Smith farm, Section 23, Union Township, Knox County, in the Clinton sand. Bottomed at 3060 feet, it is good for 60 barrels a day. Pure Oil Company had the next largest well on the Pius Snider tract, Perry County, which was bottomed at 3151 feet and yielded 22 barrels a day. Other Ohio producers were smaller. There were 31 completions recorded during the week, of which nine were producers, 11 were gas wells and 11 were failures.

Ten producers, largest of which was the 30-barrel well of South Penn Oil Company on the Flahaven Land Company tract in Lee County, were among the week's 18 Kentucky completions. Five completions were gas wells and three were failures.

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EASTERN FIELDS
Completions

OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
ATHENS COUNTY—		
Dixon Farm Oil Co., Floyd Dixon 2	4	1090
A. D. Townsend et al, James Rodaski	¶.5	1765
BELMONT COUNTY—		
Union Gasoline & Oil Corp., Wenzel Kroky 1	15	1670
L. A. Shorts et al, Albert Ramsey 2	¶.17	1352
Frank Stranges et al, G. Willerton 1	*	2580
COSHOCTON COUNTY—		
Clint L. McCord et al, Jesse Lewis 4	2	1134
FAIRFIELD COUNTY—		
City Natural Gas Co., Rebecca Loose 6	¶	2034
John Martin 2	¶	2310
GUERNSEY COUNTY—		
John Bindas, Laura Laughlin 1	*	....
George Jewell et al, Charles Gibson 1	¶.67	1212
HOLMES COUNTY—		
Lydic Oil & Gas Co., Gladys Bell 2	¶	975
KNOX COUNTY—		
East Ohio Gas Co., J. A. Smith 1	60	3060
H. E. Perkins, C. V. Banbury 3	*	4014
LICKING COUNTY—		
Emerald Petroleum Co. et al, Mrs. Archie Cochran 4	3	731
Rutledge & Mossholder Oil & Gas Co., Wm. E. Teagarden 7	5	626
Wehrle Gas Co., Ida Armstrong 1	*	2889
MEIGS COUNTY—		
Smith Oil Co., E. Bailey 1	¶1.17	890
MONROE COUNTY—		
Whitten Creek Oil & Gas Co., Arthur Hupp 7	4	1495
Homer Newhart et al, H. J. Burkhart 5	¶.1	1080
Blue Ridge Oil & Gas Co., Rex Kindall 8	*	2020
MORGAN COUNTY—		
Pure Oil Co., Everett Smith 9	*	4145
NOBLE COUNTY—		
Chaseville Oil & Gas Co., Uranus Corwin 3	¶.13	1431
Metcalf & Co., C. Masters 10	*	1225
PERRY COUNTY—		
Pure Oil Co., Pius Snider	22	3151
Mid East Gas Co., Mary E. Koehler 1	¶	3180
Moffitt & Webb, M. W. Howdyshall 2	*	....
WASHINGTON COUNTY—		
Hupp & Yerian, Washington County Infirmary 8	1	....
Best Run Oil & Gas Co., Anthony Schwartz 2	¶.14	....
W. Watterson, E. Evans 14	*	....
Harry Binegar, Ella Mellea 2	*	1165
Burt & Co., J. Pugh 22	*	470

ILLINOIS

Company, Well and Location	Init. Prod. Bbls.	Depth
CLAY COUNTY—		
Pure Oil Co., Sarah Bechtel 1	1800	2967
HARDIN COUNTY—		
Marietta Oil Co., Fricker 1	*	2345
JASPER COUNTY—		
Richard Eke, Ross Klein 1	*	2545
MARION COUNTY—		
Adams Louisiana Oil Co., Sam Pugh 1	29	1655

WEST VIRGINIA

Company, Well and Location	Init. Prod. Bbls.	Depth
BOONE COUNTY—		
Owens Illinois Glass Co., Payton Coal Land Co. 30	¶.65	4582
CABEL COUNTY—		
Hillcrest Gas Co., J. Albert Gill 2	¶.11	1328
GILMER COUNTY—		
Pittsburgh & West Virginia Gas Co., Hays & King 1	¶2.0	1400
Carnegie Natural Gas Co., D. Despard 3	¶	1688
Massey & Jarvis, Sally Showalters 1	¶.15	1610
Pittsburgh & West Virginia Gas Co., S. A. Hayes	¶4.5	....
Carnegie Natural Gas Co., Floyd Allen	¶.13	600
HANCOCK COUNTY—		
R. J. Braden Co., C. E. Brenneman 51	2	1084
KANAWHA COUNTY—		
United Fuel Gas Co., A. J. Bruen et al 4712	¶10.1	5145
Glenn Oil & Gas Co., Virginia Joint Stock Land Bank	¶1.37	4900
LINCOLN COUNTY—		
Meabon, Huffman & Dial, Almeda Dial 1	2	1600
R. H. Adkins et al, Ed Holderby Heirs 1	¶.21	3075
PLEASANTS COUNTY—		
Perry Riggs, Perry Riggs 1	1	1632
Adam Ward et al, Solomon Robinson 2	1	1715
RITCHIE COUNTY—		
Mahaney & Lucus, J. F. & Laura Kelley 8	1	....
A. R. Kelley, J. F. & Laura Kelley 2	*	1937
WAYNE COUNTY—		
Mountaineer Gas Co., L. M. Bowen 1	¶	3377
WETZEL COUNTY—		
Valley Run Oil & Gas Co., J. Miller 2	¶2.5	2300
Carnegie Natural Gas Co., Clarence Blatt 2	*	2380

KENTUCKY

Company, Well and Location	Init. Prod. Bbls.	Depth
DAVIESS COUNTY—		
Rex-Pyramid Oil Co., John Cooper 1	¶.37	610
ESTILL COUNTY—		
South Penn Oil Co., J. M. Garret 49	5	812
James Griffin 9	5	190
Johnnie Sparks, Clay Alexander 13	15	337
Petroleum Exploration Co., Sam Brinegar 15	1	201
HANCOCK COUNTY—		
Chester Oil Co., J. W. Baughn 5	25	398
Hume et al, Everett Mason 3	*	555
O. D. Vickers et al, I. C. Stephens 6	*	584
HENDERSON COUNTY—		
Bryan & Patton, J. Glenn Moorman 12	¶.3	405
LEE COUNTY—		
South Penn Oil Co., Flahaven Land Co. 93	30	....
McGann & Garrison, Andrew Combs 2	25	999
Whitmer Oil Co., J. C. White 2	10	702
McLEAN COUNTY—		
Wickland Development Co., Jake Conrad 2	¶.7	1367
OHIO COUNTY—		
Snowden & McSweeney, Howard Heirs 27	25	....
J. C. Ellis, C. R. Keith 19	10	958
Sherman Hall, W. Whittaker 1	¶.33	959
Kentucky Natural Gas Co., J. M. Reynolds 3	¶.13	604
H. Vickers et al, W. C. Richards Heirs 9	*	280

PENNSYLVANIA

Company, Well and Location	Init. Prod. Bbls.	Depth
ALLEGHENY COUNTY—		
O. Miller, O'Rourke 1	¶	....
A. Wally & Co., Grunder Bros. 1	¶	....
TIOGA COUNTY—		
Potter Development Co., H. C. Kemp 2	*	4525
WASHINGTON COUNTY—		
Union Gasoline & Oil Corp., A. O. Vankirk 6	¶1	3035
Equitable Gas Co., Mary Walker 1	¶.3	2440

MICHIGAN
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARENAC COUNTY—		
Great Western Pet., Keef 2, se se se, 3-20n-4e	400	2570
McClanahan Oil Co., Buffalo 1, se ne nw, 10-20n-4e	90	2630
Weber Oil Co., Whiting 3, ne ne ne, 10-20n-4e	475	2470
GLADWIN COUNTY—		
J. V. Wicklund Dev. Co., Campbell 4, nw sw sw, 1-18n-1w	20	3658
Campbell 2, se nw nw, 12-18n-1w	160	3652
E. S. Beaver, Thompson 1, nw ne nw, 13-18n-1w	900	3640
Mammoth Pro. & Ref., Jacab 4, ne ne se, 10-18n-1w	2400	3630
Sun Oil Co., Raab 3, sw se ne, 10-18n-1w	2500	3641
Salla 7, nw nw sw, 11-18n-1w	2600	3625
Rex Oil Co., State A4, ne ne se, 11-18n-1w	2750	3630
Cryden Pet. Co., Shaffer 4, nw ne sw, 12-18n-1w	240	3630
Gordon Oil Co., Trego 2, se se ne, 35-18n-1w	150	3585
State A3, se se ne, 36-18n-1w	50	3605
Clark & Johnson's McMahon 5, ne ne sw, 36-18n-1w	700	3588
Garfield Pet. Co., McMahon 2, ne sw sw, 36-18n-1w	700	3582
Rowmor Corp., State A2, sw nw ne, 36-18n-1w	160	3630
McClanahan et al's Johnston 1, nw nw nw, 1-17n-1w	200	3603
HILLSDALE COUNTY—		
Hughes Heinig's Daley 1, se se se, 10-7s-4w	*	1450
ISABELLA COUNTY—		
McClanahan Oil Co., Embrey 2, sw sw se, 33-15n-6w	200	3622
Bartlett 1, sw nw se, 34-15n-6w	50	3647
Pure Oil Co., McClintic B2, ne nw sw, 33-15n-6w	200	3674
Embrey A2, sw ne ne, 33-15n-6w	890	3647
Ryckman 4, ne sw ne, 33-15n-6w	300	3667
OGEMAW COUNTY—		
Ross & Bernier's Harrington 1, se sw se, 14-22n-1e	35	2886
Voorhees Inc., Donovan A2, se sw nw, 19-22n-2e	45	2760

*Failures; †Junked; ¶Million cu. ft. gas.

Oil Company

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MICHIGAN FIELDS

Four of 25 completions are in 2000-barrel class

Mt. Pleasant. — Twenty-five completions in Michigan for the week were chiefly marked by increased production in proven areas of the Buckeye-Gladwin County field. Four wells were in the 2000-barrel class.

Two other new Michigan fields, Arenac and Sherman, contributed eight more completions. Still being deepened, Devonian Oil Company's Peavy 2 NW SW SE, Section 4-20n-4e, Arenac County, flowed 2056 barrels on a 24-hour test at 2410 feet, nine feet in lime. Operators planned to deepen for second and possible third pays in the 100-foot lime section.

A five-cent per barrel price decline in Clayton-Arenac pool crude also was posted this week by carriers in the field. The new price, which became effective July 1, is $1.21 per barrel. Other fields were not affected. Carriers are now paying $1.42 for Porter, Greendale, Beaverton and Mt. Pleasant grade crudes. Buckeye and adjacent fields $1.39; West Branch grades $1.21, on par with Arenac.

Eighteen permits to drill were issued this week.

Michigan crude analyzed by Bureau of Mines

Washington.—The growing importance of Michigan as an oil-producing state has prompted the United States Bureau of Mines, Department of the Interior, to extend its study of the general characteristics of crude oils to include representative samples from 13 fields in 8 counties in the lower peninsula. The resulting report indicates that the oils are predominantly paraffin-intermediate-base, wax-bearing crudes, yielding 25 to 35 percent of highly paraffinic gasoline and about the same amount of kerosene and gas-oil combined, 12 to 15 percent of lubricating oil stock, and 20 percent of residuum with a carbon residue of about 6 to 7 percent, according to the Bureau of Mines method of crude-oil analysis and classification. There appears, also, to be some correlation which has been portrayed graphically, between certain properties of the crude oils and both the geographical location and geological structure of the oil-producing areas within the state. The producing horizons from which the samples were obtained are represented by the Berea sandstone, Upper Traverse and Traverse limstones, and the Dundee and Trenton limestone formations.

The samples from the Dundee limestone are similar to each other with certain exceptions. These differences appear in production from this formation outside of what usually is termed the Central Michigan area. The properties of certain crude oils produced within the area are much alike but show variations depending upon the distance of the producing pool from the center of the basin. The Traverse limestone samples show local variation but in general are not materially different from the Dundee production. The samples from the Muskegon and West Branch fields show considerable variation from the other limestone production in a number of properties. The Berea sandstone crude oil is characterized by relatively high viscosity of the vacuum fractions.

The 15 samples of Michigan crude oils, for which individual detailed analyses are given, were collected during May and June, 1936, and therefore represent current production, and the analyses are on a comparable basis. The oldest well covered by the samples was completed during November, 1927, and six of the samples were from wells completed in 1936. Analysis of a sample from the Bradford Third Sand of the Bradford field, McKean County, Pa., is included for comparison.

The report gives a brief discussion of Michigan oil fields, pointing out that the state has an area of 37 million acres, of which approximately 20 million acres have been classified as possible oil-producing areas. Only 5 million have been prospected, but it is possible that a large productive area may yet be found.

Copies of Report of Investigations 3346, Analyses of Crude Oils from Some Fields of Michigan, by E. L. Garton, may be obtained without charge upon request to the Information Division, Bureau of Mines, Washington, D. C.

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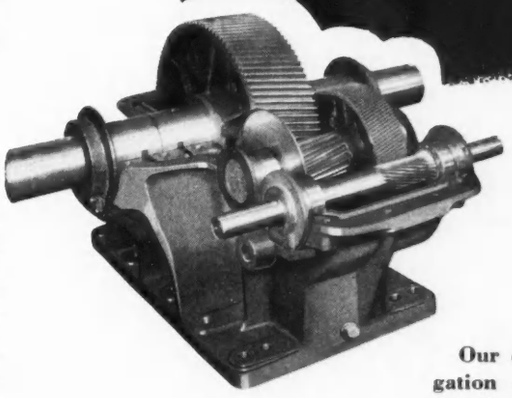

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CALIFORNIA FIELDS

Devil's Den wildcat pumps 25 barrels first day.

* * *

Grapevine wildcat plugs back to test shows.

* * *

State's deepest preparing to quit at 12,618 feet.

Los Angeles.—At last a wildcat in the Devil's Den area of Kern County, long the scene of wildcat operations, has secured some 25 gravity oil from 2670 feet. Amerada Petroleum Corporation's Beer 4, 990 feet north and 990 feet west of the southeast corner of Section 17-26-19, with casing cemented at 2640 feet, landed 44 feet of 4¾-inch liner, including 15 feet of perforated, on bottom and pumped 25 barrels the first day.

Den Petroleum Company's Bates 1, in Section 20-25-19, in the same general area, with bottom at 4286 feet, cemented a string of nine-inch at 3520 feet to take in all of the Temblor zone, and the hole will be cored ahead after testing the shut off. Every well drilled in this general area during the past several years has shown some promise, and those holding leases feel they would not be justified in turning them back.

Going Back to Upper Shows

Grapevine area in Kern County is not looking any too good, although some of the tests produced some oil and some gas. Ohio Oil Company's Title Insurance 1, Section 21-11-19, which a few days ago ran into basalt at 9642 feet, cored to 9650 feet in the same formation. This test has been plugged back to test showings from 6637 to 6662 feet. Reserve Oil & Gas Company is drilling No. 4 in this area at 5074 feet in brown shale, and Wilshire Oil Company's Tejon 1, Section 5-10-19, is bottomed at 4452 feet with a caving hole.

In the Lost Hills area of Kern County, The Texas Company is planning to drill a wildcat in Section 33-25-20. Drilling operations probably will start in August.

Wasco Test Reaches 11,100 Feet

In the Wasco area of Kern County, the joint test of Seaboard Oil Corporation and Tide Water Associated Oil Company, No. C-1, Section 26-27-24, is coring ahead at 10,100 feet in brown shale. Oil showings in shale fractures have been the only encouragement so far. More than 3000 feet of the brown shale section has been penetrated.

Abandoning Deepest

The deepest hole ever drilled in California will be abandoned. This is Superior Oil Company and Union Oil Company's test, in the general Ten Section area of Kern County, Section 11-30-26, with old bottom at 12,618 feet. Drill pipe was stuck, and upper showings have been tested by gun perforations. None was productive. Bugs found in the formations were handed over to Shell Oil Company paleontologists for classification.

Union Oil Company's wildcat in the Rio Bravo area of Kern County, Kernco 1-34, Section 34-28-25, is bottomed at 9646 feet, with 13⅜-inch casing cemented at 1143 feet, giving the well 8503 feet of open hole.

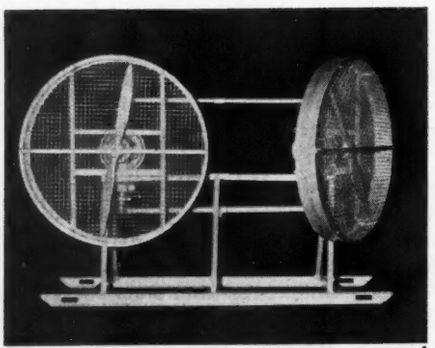
At Dominguez in Los Angeles County, Union Oil Company's Callender 50, has plugged back from 10,435 feet and has been testing upper zones. In this same field, Shell Oil Company's Reyes 90, with bottom at 9598 feet, has plugged back to 7580 feet and is fishing.

Union Oil Company also has been having trouble at Bell 100 at Santa Fe Springs. It ran into a fishing job with bottom at 10,789 feet and is trying to sidetrack stuck drill pipe. The outlook is not encouraging. It is rumored that Wilshire Oil Company, holding important leases at Santa Fe Springs, will also attempt a deep test. Apparently several of the operators in this old field believe that deeper production is possible.

Wilmington Booming

Wilmington, the busiest field in California, is going fast. Union Pacific Railway, with a large number of small tracts, and all of its tests offsets, is the busiest operator in the field. This company has 11 drilling wells in the field, in addition to 18 rigs and eight locations. Union Pacific some years ago came into possession of a large number of small tracts, and when oil was discovered in the Wilmington area, it was forced to drill a number of offsets to protect its various tracts from drainage.

So far, no major company has agreed to build gathering lines in the Wilmington field and post a price .A large number of the smaller operators have failed to agree to curtail their production to a proper amount, and until they do, no major pipe line will bother with the field. One independent refiner has posted a price of about 10 cents above the present tank truck price, but this refiner can take only a limited amount of oil per day. But his action has helped to boost the going price of Wilmington oil.



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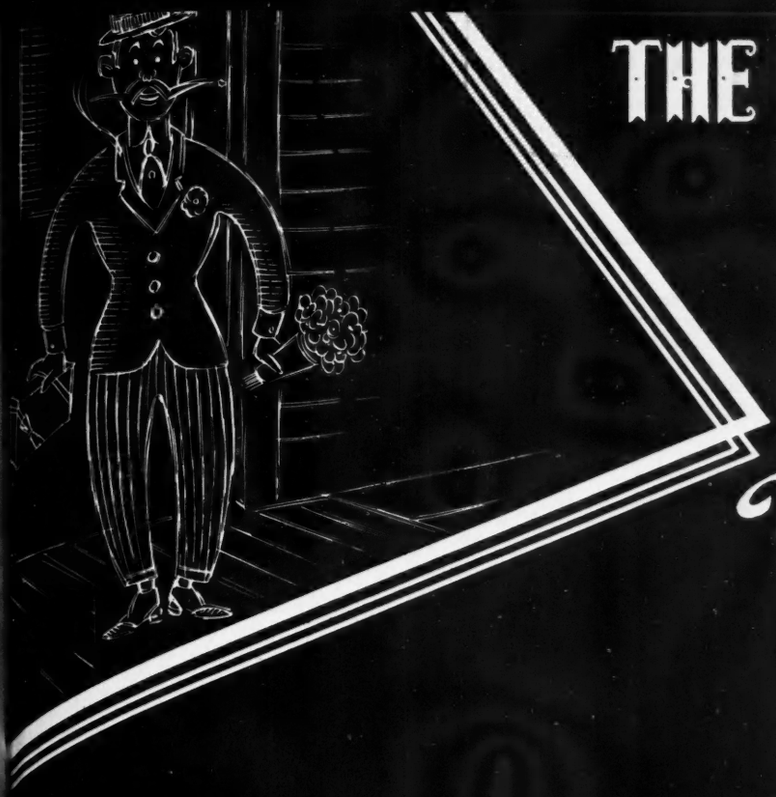
CALIFORNIA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
GREELEY—		
Standard, K. C. L. 12-1	50	8496
KERN FRONT—		
Republic Pet. Co., Cal. Tech 2	330	1909
KETTLEMAN HILLS—		
Standard, No. 81-33J	805	8047
MIDWAY SUNSET—		
Signal Oil & Gas, Wallace 5	160	2906
Standard, No. 93-33D	740	3120
B.-Zone Oil Co., No. 1	*	4397
MOUNT POSO—		
Shell, Vedder-Rall 13	600	1810
ROUND MOUNTAIN—		
Honolulu Oil Corp., No. 13	370	1955
EL CAPITAN—		
Shell, Covarubias 1-24	670	1328
SAN MIGUELITO—		
Continental Oil Co., Grubb 7	1000	6860
SAN LUIS OBISPO COUNTY—		
Pismo Pet. Co., Scott 1	*	4424
TEN SECTION—		
Superior Oil-Union Oil, K. C. L. 8	*	12,618
KERN COUNTY—		
Golden Bear Oil Co., Cohn 1	*	1633
HUNTINGTON BEACH—		
Standard, Thomson 4	320	3820
MONTEBELLO—		
Universal Cons., No. F-1	675	5828
No. American Cons., Glass 1	*	6302
RICHFIELD—		
Union Oil Co., Morse 10	15	3300
SEAL BEACH—		
Standard, San Gabriel 28	45	6530
WILMINGTON—		
Bankline Oil Co., Pac Terminal 7	215	3365
F. C. Hall, No. 15-7-1	400	3650
A. T. Jergins Trust, No. 2	375	3469
MacMillan Pet. Corp., Hayes 2	600	3625
Pacific Western, Thiele Com. 1	300	2849
Royalty Service Corp., Nelson B-6	490	3520
Santa Fe A-1	400	3620
Sovereign Oil Corp., Advance 4	150	3610

*Failures; †Junked; ¶Million cu. ft. gas.



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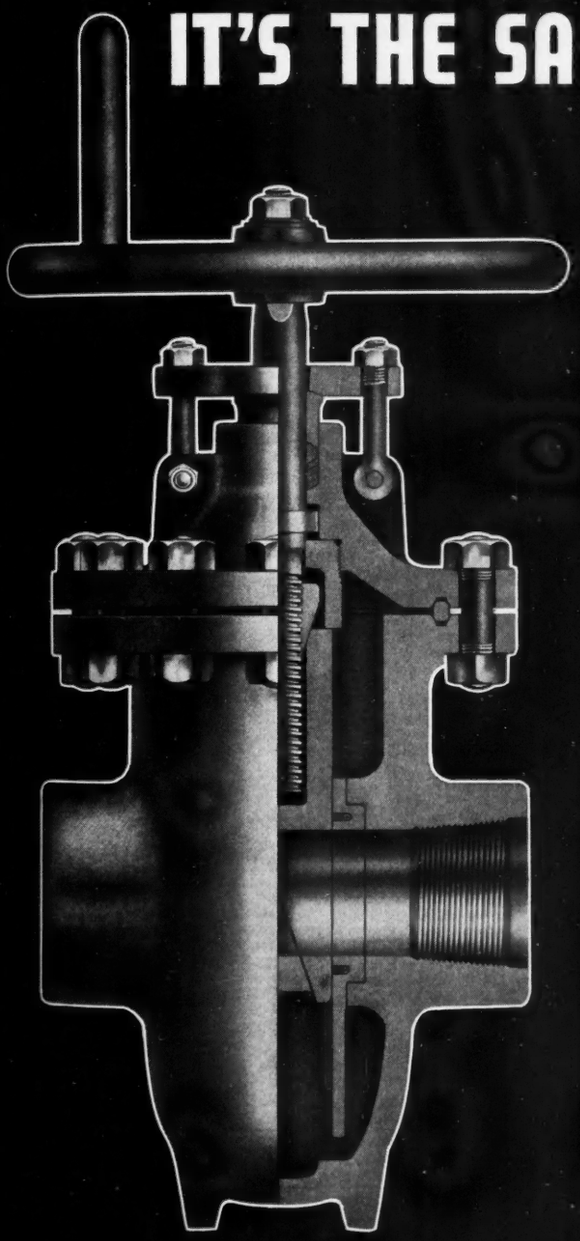

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IMPORTANT WILDCAT TESTS

ALABAMA

CHOCTAW COUNTY—Joe Modisett et al's McCarvey 1, sw sw 20-9n-2w, dd 200 ft.

GREENE COUNTY—Greene County Dev. Co.'s R. C. Lett 2, se nw 6-21n-2e, sd 115 ft.

HOUSTON COUNTY — Rice O&G Co.'s Oakley Est. 2, se nw sw 9-3n-29e, arr deepen, td 4975 ft, Tuscaloosa.

MOBILE COUNTY — Grand Bayou O&G Co.'s J. A. Stafford 1, sw sw 24-7s-3w, lcn.

ARKANSAS

ASHLEY COUNTY — Phillips Pet. Co.'s Stillions Lbr. Co. 1, s½ sw nw 18-17-9, spd woc surf csg.

CLARK COUNTY—Martin et al's C. L. Cabe 1, nw nw 14-10-20, dr 1695 ft shale.

CLEVELAND COUNTY—Texas Canadian Dev. Co.'s I. E. Moore Est. 1, ne ne 22-9-10, dr 3818 ft.

COLUMBIA COUNTY—Robt. Keen's Runyon 1, 1-16-21, rur.

CRITTENDEN COUNTY — Stanley Oil Corp.'s Nanner Hrs. 1, nw se 18-8-9, spd, dr 200 ft.

HEMPSTEAD COUNTY—Easton, May & Murdock's La Grone 1, ne ne 5-12-26, woc 131 ft. Davidson & Todd's Smith 1, sw se 1-11-25, dr 1940 ft shale.

LINCOLN COUNTY—Fitzwater et al's V. Bowens 1, nw sw ne 26-9-6, 10-in csg 20 ft.

LONOKE COUNTY—Frank Silver's Chambers Est. 2, 17-2-7, sd 1412 ft paraffin.

MADISON COUNTY—J. E. & Jno. Handy's Hamlin 1, sw nw se 8-16n-26w, mim.

MILLER COUNTY—W. L. McClanahan's Capps 1, ne sw 11-20-28, elev 284 ft, used 3000 gallons acid, went dead, cleaned tubing, flowed 45 bbls in 2 hrs, went dead again, co td 6016 ft; Capps 2, swc 11-20-28, lcn. F. W. Burford's Capps 1, cent East 40 ac 14-20-28, spd. J. O. Gerald B-1, nec 15-20-28, spd; J. E. Eason 1, sw se 11-20-28, rur; J. E. Eason 2, w se 11-20-28, rur. W. M. Layton's Terry 1, nwc 14-20-28, spd dr 1700 ft. E. H. Moore, Inc.'s Dale 2, 24-15-26, elev 250 ft, top Young 4320 ft, top Travis Peak, 4654 ft, 8⅝ in csg 5655 ft, unlodging hung drill stem to run electrical tester, td 7310 ft. Standard of La.'s Sarah Harvey 1, sw sw 33-16-25, dr 5715 ft hd lime.

NEVADA COUNTY — Benedum & Trees' Groves 1, se nw 10-14-20, big lime 5144-5394 ft, top salt 5510 ft, pb to 2186 ft to perf at Tokio, old td 6147 ft. Stewart et al's Walters 1, nw ne 1-14-20, owdd, co, td 2313 ft. Bruce Wallace's Wm. Haynie 3, se nw 6-14-20, pb to 1166 ft, woc, old td 2400 ft.

ST. FRANCIS COUNTY—Manning & Martin's Gregg 1, ne sw nw 20-5n-5e, rur.

UNION COUNTY—Alice Sidney Oil Co.'s Powledge 1, sw se 7-18-17, so 5599-5614 ft, coring so 5719 ft. W. D. Wingfield's Southern Kraft 1, sw ne 18-16-14, elev 124 ft, sd repr rig 3526 ft. I. J. Langley's K. K. Langley 1, nw se ne 1-19-18, mim.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*
‡—*salt water (completions).*
†—*junked and abandoned.*
¶—*million feet of gas.*
abd—*abandoned.*
bbls—*barrels.*
br—*building rig.*
b.s.—*basic sediment.*
csg—*casing.*
co—*cleaning out.*
dd—*drilling deeper.*
dk—*derrick.*
dr—*drilling.*
fsg—*fishing.*
ft—*feet.*
hfw—*hole full of water.*
in—*inches.*
lcn—*location.*
m—*milling.*
mim—*moving in materials.*
mit—*moving in tools.*
mot—*milling on tools.*
n, s, e, w—*north, south east, west.*
oih—*oil in hole.*
owdd—*old well drilling deeper*
owpb—*old well plugging back.*
pb—*plugged back or plugging back.*
r—*reaming.*
rog—*rig on the ground.*
rur—*rigging up rotary tools.*
rust—*rigging up standard tools.*
sd—*shut down.*
sdtr—*sidetracking.*
sg—*show gas.*
si—*shut in.*
so—*show oil.*
so&g—*show oil and gas.*
spd—*spudding.*
sr—*straight reaming.*
sw—*salt water.*
td—*total depth.*
ur—*underreaming.*
wih—*water in the hole.*
wo—*workover.*
wocs—*waiting on cement to set.*
wosr—*waiting on standard rig.*

CALIFORNIA

FRESNO COUNTY

CANTUA CREEK—Western Gulf Oil Co.'s Skelley Estate 1, 32-16-15, rur.

KERN COUNTY

DEVIL'S DEN—Amerada Pet. Corp.'s Beer 4, 17-26-19, td 2670 ft, to test on pump. Den Pet. Co.'s Bates 1, 20-25-19, td 4286 ft, wocs 9 in at 3520 ft. Geo. Goodrum's Baron 1, 24-25-18, sd 320 ft. Lube Oil Co.'s Gordon 1, 2-25-18, td 4280 ft, to deepen.

CARISSA PLAINS—Anchor Pet. Corp.'s No. 1, 31-31-22, grading roads. Eocene Oil Co.'s No. 1, 31-31-22, rig.

BENA—Bacal Oil Corp.'s No. 1, 5-30-30, sd 1790 ft. Cajalco Pet. Co.'s Brown-Pallette 1, 9-30-30, dr gray sand and shale 3475 ft.

ROUND MOUNTAIN—Calif. Western Oil Co.'s Durual 1, 4-28-29, rig, abn. Hillman-Long's Olcese 1, 26-28-29, lcn. J. J. Tevis' No. 1, 4-29-29, rig.

KERN FRONT—C. C. M. Oil Co.'s Carter 1, 7-27-27, dr shale 4386 ft. Seskayden Oil Co.'s No. 3-A, 17-28-27, td 2890 ft, pumping 50 bbls 14 gravity oil, cut 20 percent.

WASCO—Continental Oil Co.'s K.C.L. A-2, 8-27-24, dr shale 4987 ft; K.C.L. B-1, 12-29-26, dr shale 9714 ft. Seaboard Oil-Tide Water Associated's K.C.L. C-1, 26-27-24, dr shale 10,100 ft.

JASMINE—Doyle Pet. Co.'s Quinn 1, 15-25-27, td 2956 ft, plug 2882 ft, trying to pump.

PREMIER—General Pet. Corp.'s Umbsen 1, 36-27-26, dr shale 2014 ft.

EDISON—East Edison Oil Co.'s No. 1, 23-30-30, dr shale 1670 ft. Superior Oil Co.'s Cohn 1, 12-30-29, td 1633 ft, plug 641 ft (formerly Golden Bear Oil Co.), abn.

KERN RIVER—Italo Pet. Corp.'s Koshland 1, 19-28-28, dr shale 2460 ft. Ray Luse's McNeil 1, 10-28-28, dr gray sand 1375 ft.

SAN EMIDIO—Kern Leasing Co.'s No. 2, 14-10-23, sd 310 ft. Union Oil Co.'s Morrison 1, 31-11-22, dr shale 1582 ft.

GRAPEVINE—Ohio Oil Co.'s Title Ins. D-1, 21-11-19, td 9652 ft in basalt, top at 9642 ft, to plug and test 6637 to 6662 ft. Reserve Oil & Gas Co.'s No. 33-4, 33-11-19, dr brown shale 5074 ft. Wilshire Oil Co.'s Tejon 1, 5-10-19, td 4452 ft, co hole caving.

STRAND—Ohio Oil Co.'s K.C.L. E-2, 6-30-26, dr gray sand 8767 ft.

TEN SECTION—Shell's Canal 21-14, 14-30-25, td 8613 ft, r. Superior Oil Co.-Union Oil Co.'s K.C.L. 8, 11-30-26, td 12,618 ft, abn.

FRUITVALE—Shell's Bellevue A-36-31, 31-29-27, dr sandy shale 5652 ft.

McGUNDEN — Superior Oil Co-Jergins Trust's Crome Com. 2, 36-29-28, td 2775 ft, pumped 80 percent water, some oil, trying to shut off water.

MOUNTAIN VIEW — Union Oil Co.'s Standard Oils' Barnbeltz 1, 1-30-28, lcn.

RIO BRAVO—Union Oil Co.'s Kernco 1-34, 34-28-25, dr brown shale 9645 ft.

MISCELLANEOUS

HUMBOLDT COUNTY—Texas Co.'s Eureka 2, 22-3-1, td 7708 ft, co at 7360 ft, hole caving.

KINGS COUNTY—Birch-Royer Oil Co.'s Wm. Orr 1, 5-23-17, dr shale 2118 ft. Ray Bisconer's No. 2, 11-24-20, dr sandy shale 1400 ft. Central Calif. Utilities' Kettleman-Lakeview 3, 11-23-19, td 1202 ft, plug 1190 ft, sd. Dudley Ridge Dev. Co.'s No. 2, 24-23-20, dr shale 1200 ft. Kettleman View Oil & Gas Co.'s No. 1, 9-22-19, sd 4787 ft. Glen C. Stone's Teeter 1, 25-20-20, dr shale 1314 ft. Tri-Counties Oil Co.'s Olson 1, 10-23-22, td 4300 ft, to resume dr.

MADERA COUNTY—Tide Water Associated's Gill 1, 27-12-15, lcn.

SAN JOAQUIN COUNTY — Standard's Woods Com. 1, 24-1-5, td 5866 ft, running formation tester. Texas Co.'s Lawrence-Stephens 1, 8-1-6, dr sandy shale 3716 ft.

STANISLAUS COUNTY — Coast Explor. Co.'s No. K-2, 1, 30-4-9, td 5275 ft, running formation tester.

SUTTER COUNTY—Buttes Oilfields' No. 4, 2-15-1, td 5800 ft, fsh.

TULARE COUNTY—Amalgamated Oil & Gas Corp.'s A. O. G. 1, 29-24-24, foundation. E. P. Jennings' No. 1, 4-24-23, td 2707 ft, plugged bottom, bailed dry; No. 2, 33-23-23, rig. Standard's Morris 1, 36-24-23, rur. L. E. Turner's Glaze 1, 15-22-26, dr shale 2070 ft.

YOLO COUNTY—Empire Oil & Gas Co.'s

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No. 1, 8-9-3, lcn. Standard's Hooper 1, 32-9-1, rur.

MONTEREY COUNTY—Amil A. Anderson's Hillman 1, 15-24-14, td 1095 ft, co. California Oils' No. 1, 33-23-15, td 3500 ft, bailing. Shell's Branch 1, 34-24-10, td 8994 ft, plug 8676 ft, swabbed water, co; Branch 2, td 8662 ft, plug 8045 ft, sd.

SAN LUIS OBISPO COUNTY—Burkholder Oil Corp.'s Clay 1, 14-10-26, sd 3252 ft. R. A. Foster's McKee 1, 2-32-23, td 5087 ft, plug 3950 ft, sd. A. O. Lewis' Pecho 1, 34-30-10, td 2750 ft, bailing. Temblor Oil Co.'s No. 1, 22-31-21, dr shale 1860 ft. Oscar Willett's No. 1, 27-26-13, rig.

SANTA BARBARA COUNTY—E. C. Arnold's Arnold-Apache 2, 8-8-33, dr shale 4800 ft. Hancock Oil Co.'s Los Alamos 2, 6-7-32, dr gray shale 3174 ft. Leora Oil Co.'s Fithian 1, 8-4-25, sd 1025 ft. Midwestern Oil Co.'s No. L-1, 28-4-27, td 2054 ft, to test on pump. Nine Springs Oil Co.'s Brinkinhoff 1, 9-7-30, td 3300 ft, bailing mud and water. J. L. O'Donnell's No. 1, 21-10-34, lcn. 101 Oil Co.'s Hollister's No. 1, 35-5-33, td 358 ft, to deepen. Pacific Western Oil Co.'s Hobbs 1, 21-10-34, td 4225 ft, wocs 8⅝ in at 3800 ft; Hobbs 2, 21-10-34, foundation. S. E. D. Oil Co.'s No. 1, 27-10-34, td 2322 ft, wocs 13⅜ in at 775 ft. So. Calif. Dr. Co.'s Houk 1, 9-9-33, td 5008 ft, redr to 5003 ft, to set 7 in. Tide Water Associated's Leonis 1, 3-6-33, dr shale 300 ft. United Western Oil Co.'s No. 1, 16-7-30, grading. Valley Oil Co.'s Chief 1, 20-9-34, td 2315 ft, locating water. Vista Del Mar Oil Co.'s Williams 1, 16-4-26, dr red shale 2610 ft.

SANTA CRUZ COUNTY—Elba Oil Co.'s Elba 1, 6-12-1, spud 6/28, dr.

VENTURA COUNTY—Continental Oil Co.'s Casitas 1, 7-3-23, dr hard sand 7930 ft. El Rio Oils' El Rio 1, 6-1-21, td 3024 ft, to place on pump. Richfield Oil Co.'s Core Hole 1, 18-2-20, lcn; McFarland 1, lcn. Giovanni Vais Scott 1, 4-4-21, last report 450 ft.

SOUTHERN CALIFORNIA

NEWHALL—Barnsdall Oil Co.'s Rancho S. F. 1, 26-4-17, td 6472 ft, pumping 150 bbls, 36.8 gravity clean oil; Rancho S. F. 2, dr sand and shale 2158 ft. Holbrook Pet. Co.'s Newhall Land 1, 28-4-16, td 5841 ft, to run formation tester.

PICO CANYON—A. G. Burt's No. 1, 36-4-17, dr hard sand streaks shale 1818 ft.

LYNWOOD—Calizoo Oil Co.'s Saulque 1, 9-3-13, dr sand and shale 6888 ft.

EAST TORRANCE—Carson Oil Co.'s No. 1, 31-4-13, spud 6/30, dr.

NO. LONG BEACH — Geo. L. Clayton's Clayton 1, 32-3-12, td 4895 ft, co.

FOX HILLS—Country Club Oil Co.'s No. 1, 19-2-14, dr sand and shale 3425 ft.

ROSECRANS — Harmon-Fisher's Rosecrans 1, 19-3-13, rig.

HERMOSA BEACH—C. M. Henderson's No. 1, dr sand and shale 2900 ft.

DAVIDSON CITY—Hilldon Oil Co.'s Flood Control 2, 13-4-13, ready to spud.

SUNSET BEACH—A. S. Johnston Dr. Co.'s No. 1, 20-5-11, rur.

WALNUT—Julian & Criswell's Langstaff 1, 5-2-9, dr brown shale streaks sand 1934 ft, gas showing on ditch.

HAWTHORNE—Lennox Pet. Corp.'s Lennox 1, 3-3-14, dr sandy shale 1948 ft.

PALOS VERDES—McClaren Bros. No. 1, 27-4-14, td 3970 ft, redr to 1870 ft, to run liner.

MONTEREY PARK—Wales Pet. Co.'s Haig 1, 26-1-12, dr shale streaks tar sand 2036 ft.

ORANGE COUNTY—Wm. Alexander's No. 1, 22-3-9, foundation. Amalgamated Oil & Gas Co.'s Parr Com. 1, 22-3-9, lcn. Mesa Oil Co.'s Mesa 1, 29-6-10, td 7865 ft, plugged back to test upper showings. Richfield Cons. Oil Co.'s No. 1, 22-3-9, td 1760 ft, ran liner to test on pumper. Signet Oil Co.'s No. 1, 21-3-9, dr sand and shale 1700 ft. West American Oil Co.'s Irvine 1, 14-5-9, dr hard brown shale 4958 ft.

KANSAS

BARBER COUNTY—Pryor & Lockhart's Gant 1, cse ¼ 7-31s-13w, take pot. Barbara Oil Co.'s Holmes 1-27, cnw nw 27-33s-13w, dr 4718 ft. W. I. Southern's Davis 3, se se ne 24-34s-15w, dr 1905 ft.

BARTON COUNTY — Republic Nat. Gas Co. & Continental's Moeder 1, ne ne sw 25-17s-13w, td 3440 ft, testing. Sam Murphy's Beck 1, ne ne ne 17-17s-12w, dr 440 ft. S. E. Bailey's Hammeke 1, ne ne sw 12-18s-12w, dr 3380 ft. Shell Pet. Corp.'s Schneider 1, cse ¼ 12-16s-14w, cor. Stanolind O&G Co.'s Schartz 1, nw nw nw 33-19s-11w, td 3333 ft, to run 7-in csg. Helmerich & Payne et al's Sessler 1, sw sw se 29-20s-11w, pipe frozen at 80 ft. Hanna et al's Luce 1, sw sw sw 21-20s-13w, dr 105 ft.

BUTLER COUNTY—Simpson Oil Co. et al's Dennis 1-A, ne ne sw 15-26s-6e, dr 2720 ft. Maurer & Saco Oil Co.'s Connell 1, ne ne sw 27-29s-5e, dr 1950 ft.

CHASE COUNTY—Calif-Illinois-Kansas Oil Co.'s Hughes 1, sw nw se 13-22s-9e, ru mach.

CHAUTAUQUA COUNTY—Robinson et al's Foster 1, sw sw sw 6-33s-12e, dr 1810 ft. C. L. Brosius et al's Garrett 1, nw sw nw 26-32s-11e, dr 843 ft.

COWLEY COUNTY—Blair, Continental & McKnab's Miller 1, ne nw sw 14-32s-5e, td 3145 ft, pop. McCoy, Amerada & Wentz' Anderson 1, se nw ne 34-34s-6e, dr 2610 ft. Tom Palmer et al's Ogroskey 1, se se nw 31-32s-6e, td 3161 ft. Trees Oil Co.'s Hornbeck 1, nw nw nw 5-33s-4e, td 1843 ft, ur 10-in csg. Earl Wakefield's Powers 1, nw sw nw 8-32s-6e, dr 1012 ft. Lewis Prod. Co.'s Feaster 1, se nw sw 36-32s-5e, mit.

ELK COUNTY—Republic Nat. Gas Co.'s Glasscock 1, se ne sw 19-31s-11e, co 2012 ft. Tyrrell's Sellars 1, se se se 11-31s-9e, td 2322 ft, est flow 75 bbls wtr and 100 bbls oil per day. Morgan et al's Cook 1, nw nw nw 29-30s-12e, dr 563 ft.

ELLIS COUNTY—Empire's Samuelson 1, ne ne ne 31-11s-16w, woc. Billings' Smith 1, se se nw 14-12s-16w, rig burner, dropped 5-in, td 3370 ft, swab 4 bbls oil per hr, 16 hrs. Earl Wakefield et al's Burnett 1, nw nw ne 1-11s-18w, dr 2185 ft. Austin Drlg. Co.'s Karlin 1, nw nw nw 13-12s-18w, ru. Muth's Penney 1, nw nw ne se 29-14s-18w, sd 315 ft. Vickers et al's Parker 1, cn ½ ne nw 35-11s-18w, dr 1185 ft. Empire O&R Co.'s Hall 1, ne ne ne 14-11s-17w, dr 1020 ft. Lario O&G Co.'s Bell 1, nw nw ne 8-12s-18w, rig. Western Kan O&R Corp. & Aylward Prod. Co.'s Schmeidler 1, nw nw nw 22-12s-17w, rig. Skiles et al's Jensen 1, sw se ne 26-12s-18w, ru. Reynolds et al's Polcyn 1, se se ne 24-13s-16w, rig (cable).

GRANT COUNTY—Kuhn Bros.' Alderman 1, csw ¼ 18-29s-35w, dr 918 ft.

GREENWOOD COUNTY—Ward McGinnis et al's Henley Estate 1, sw sw sw 25-25s-9e, pb. Western Kan O&R Co.'s Taylor 1, se se sw 6-27s-12e, dr 1000 ft.

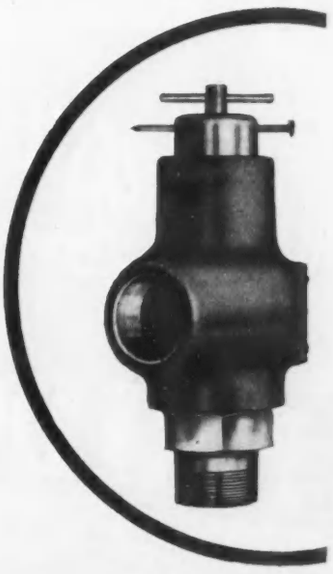
HAMILTON COUNTY—Barnsdall Oil Co. et al's Porter 1, sw sw ne 30-25s-41w, fsg 4390 ft.

HARPER COUNTY—Magnolia Pet. Co.'s Arch Freeman 1, se nw sw 3-31s-6w, dr 2155 ft.

HARVEY COUNTY—Simpson & Noble et

The SHEAR-RELIEF Valve is this pump's guarantee against damage from excess pressures. Thus, with a comparatively negligible investment in this Safety Valve, the operator is protecting one of the most costly items of drilling equipment.

Note the SHEAR-RELIEF Valve in the circle above, and the close-up view at right. When pressure reaches the seat point the nail shears, releasing fluid through the valve outlet. The sheared nail is the only damage, and resetting with another nail requires only a minute. Complete instructions are carried on the nameplate.



FLUID-PISTON SLUSH PUMPS
ABERCROMBIE PUMP CO.
GULF BLDG. HOUSTON TEX.

SHEAR-RELIEF VALVE

al's Pierce 1, sw se ne 25-22s-2w, ur 8-in csg. Bell O&G Co. et al's Austin 1, se ne ne 28-23s-1e, rur. E. I. Shaffer et al's Epp 1, se se sw 15-23s-3w, dr 260 ft.

KEARNEY COUNTY — J. L. Murphy's Masonic Home 1, cnw ¼ 1-26s-36w, fsg 519 ft.

KIOWA COUNTY—Stanolind & Amerada's Pyle, Jr. 1, cnw ne 8-29s-16w, dr 1635 ft.

MARION COUNTY—West Kan. O&R Co.'s Suderman 1, se sw nw 22-20s-2e, ru cable.

McPHERSON COUNTY — Bradley Bros.' Barnholt 1, sw sw se 30-20s-5w, td 3331 ft, bail and co. Smith et al's Larson 1, nw nw sw 35-18s-5w, dr 3385 ft. Fred C. Frank et al's Doles 1, se nw ne 12-19s-1w, sd for wtr well. Wamhoff et al's Nuse 1, se se sw 18-18s-4w, sd for repairs.

MITCHELL COUNTY—Geo. Seidhoff et al's Greiss 1, sw sw se 16-8s-10w, dr 3524 ft. ssg.

NESS COUNTY—Newton Dev. Co. et al's Tenny 1, nw nw se 19-18s-25w, 3500 ft oih at 4406 ft, td. Jones & Lane's Page Milling Co. 1, se se nw 36-18s-26w, td 400 ft, wo 15-in csg.

PAWNEE COUNTY—Simpson Oil Co. et al's Hewson 1, se se sw 13-21s-17w, dr 3422 ft.

PRATT COUNTY — Atlantic, Empire & Skelly's Runyon 1, sw nw ne 11-27s-13w, shot 20 qts 3931½ ft.

RENO COUNTY — Carter, Continental & Empire's Bontrager 1, C-54, ce ½ ne ne 26-24s-5w, dr 3305 ft. Sam Schneider et al's Krdecker 1, ne ne ne 12-22s-5w, mim.

RICE COUNTY—Fred Phillips et al's Hubenett 1, sw ne sw 23-20s-8w, co. Comanche Oil Co.'s Cramm 1, sw sw se 15-19s-9w, testing. Hipple et al's Wernett 1, ne ne nw 11-20s-6w, td 3299 ft, sso. Skiles et al's Helmer 1, nw nw ne 7-19s-8w, hfw 3260-65 ft, sd. Witt et al's Fair 1, ne se se 4-22s-8w, fsg 2245 ft. Skiles et al's Campbell 1, se se ne 28-19s-9w, ru. H. V. Holland et al's Brothers 1, se se se 12-21s-7w, sd 1605 ft. Gillespie et al's Strong 1, ne ne nw 9-18s-8w, ru. Bell O&G Co. and Shell Pet. Corp.'s Wilkens 1, nw nw ne 23-21s-9w, cor. John Hanna et al's Marshall 1, ne nw nw 30-18s-8w, sd.

ROOKS COUNTY—Brunson Drlg. Co. et al's Casey 1, se se ne 22-9s-16w, dr 3647 ft. S. C. Hoel et al's Ives 1, sw sw ne 11-7s-18w, dr 3110 ft. W. W. Kiskadden et al's Ham 1, sw sw nw 25-7s-19w, rig. Graham et al's Fike 1, sw sw sw 9-9s-17w, sd.

RUSH COUNTY—S. A. Murphy et al's Roth 1, nw nw sw 21-16s-18w, dr 3227 ft. Duee & Brouk's Lebsack 1, se se ne 13-16s-16w, sdo 3512 ft. Westgate-Greenland Oil Co. et al's Greenwalt 1, nw nw ne 19-19s-16w, pb to 3777 ft. Carter Oil Co. et al's Prosch 1, cel n½ se 21-18s-16w, rust 3614 ft. Crawford et al's Jones 1, nw nw nw 35-17s-16w, rur.

RUSSELL COUNTY—Goldstein & Vernon O&G Co.'s Steinert Estate 1, ne se sw 34-15s-15w, rep rig. Aylward et al's Jones 1, se se nw 22-14s-13w, hfw 3230 ft. Billings et al's Boxberger 1, ne ne se 21-14s-14w, A w 5000 gals, swab 70 bbls oil, 7 hrs, to pop. H. C. Eisenhour et al's Krouse 1, se se nw 18-13s-12w, spd and sd.

SCOTT COUNTY—Olson Drlg. Co. et al's Nolan 1, nw nw ne 13-19s-33w, set 9-in csg 2100 ft, co to btm.

SEDGWICK COUNTY—Roxanna Drlg. Co. et al's Woodman 1, sw nw sw 26-26s-1w, sd 2469 ft. E. B. Shawver's Furman 1, sw ne se 24-29s-3w, dr 3179 ft. Union O&R et al's Howell 1, sw sw sw 6-29s-1e, ru. Ryan Consolidated et al's Williams 1, nw nw se 17-25s-2w, dr 3480 ft. E. H. Moore's Waco 1, sw sw nw 29-29s-1e, set 12½ in csg 219 ft, woc.

STAFFORD COUNTY — Rosepring Drlg. Co. et al's Gray 1, nw nw nw 11-24s-13w, set 7-in csg 3843 ft. Atlantic O&R Co.'s Kachelman 1, se nw nw 13-25s-14w, dr 4333 ft.

SUMNER COUNTY—Glimac Oil Co. et al's Proud 1, sw se se 33-30s-1w, dr 4018 ft. W. M. McKnab's Blair 1, sw sw sw 7-30s-1e, ru. Faulkner et al's Nevitt 1, ne nw ne 36-32s-6e, testing. Burton's Springate 1, ne ne sw 30-33s-2e, sd 91 ft. National Ref. Co.'s Schwantes 1, nw sw ne 16-32s-3e, lcn. Douglas & Gear's Strickler 1, sw nw ne 30-32s-1w, dr 515 ft.

TREGO COUNTY—W. I. Southern's Latimer 1, nw nw se 19-15s-22w, ur 7-in csg and co. Turner et al's Rogers 1, csw ¼ 3-15s-23w, dr 2970 ft. F. L. Thorn et al's Dix 1, se se sw 31-14s-24w, dr 2352 ft.

WOODSON COUNTY — Morris et al's Koening 1, se se nw 35-24s-15e, sd 1231 ft. Fred Rapp's Houghland 1, nw nw se 2-25s-15e, dr 600 ft. B & B Oil Co.'s Lockard 1, nw nw ne 2-26s-13e, dr 1040 ft.

NORTH LOUISIANA

BIENVILLE PARISH—DeSoto O&G Co.'s Wm. Ashley 1, sw se 15-16n-10w, sr 5600 ft; Wm. Ashley 2, 15-16n-10w, lcn. Hunt & Seaboard's Goodpine 1, se se 30-14n-5w, sd 6862 ft lime. Lide, Greer et al's Davis Lbr. Co. 2, w½ w½ 12-16n-5w, dr 5235 ft.

CADDO PARISH—W. J. Hunter et al's N. B. Stoer 1, 10-15n-15w, dr 6407 ft. R. W. Norton's Payne No. 1, se se 27-23n-16w, top Permian salt 11,470 ft, td 11,486 ft. Prairie River Synd.'s Hutchinson 1, 15-15n-12w, sd 8040 ft. Fallon Oil Co.'s Cupples 1, 24-16n-13w, woc, td 5675 ft.

CLAIBORNE PARISH—J. R. Bevill et al's Alex Edmonds 1, ne ne 16-20n-5w, recondition hole 5065 ft. J. B. Bond, Burgess 1, 3-20n-5w, arr acidize 5800 ft. United Gas et al's Caskey 1, 7-19n-5w, est 10-15 mil ft gas, td 5702 ft.

DE SOTO PARISH—Grogan Oil Co. et al's Ramsey A-1, se nw 36-11n-11w, flowing 20 bbls 39.6 gravity oil per hour, td 2961 ft. Pearl Oil Corp.'s Joyner 1, 28-11n-12w, dr 5250 ft. A. D. Robinson's Allison 1, 17-14n-13w, woc 63 ft. C. T. Ruffing's Redding 1, 35-11n-11w, rur.

FRANKLIN PARISH—Jenson et al's Grayson 1, c ne 36-12n-6e, dr 2350 ft.

LINCOLN PARISH—G. E. Burford et al's Hanna 1, w½ se 34-18n-4w, spd, dr 600 ft. H. D. Easton and Belmont Quadrangle Drlg. Co.'s G. W. Dye 1, ne ne 21-19n-4w, pb to 4744 ft, old td 6010 ft. E. T. Oakes, Easton et al's R. L. Sanderson 1, 30-18n-1w, dk.

MOREHOUSE PARISH—Rondeau et al's Clarke 1, 10-20n-7e, owdd, td 3755 ft.

NATCHITOCHES PARISH—Jack Lent et al's Locke 1, 26-9n-9w, sd 2962 ft. Roy Raines et al's Allen 1, 22-9n-10w, sd 220 ft.

RED RIVER PARISH—Whitehurst et al's LeLong 1, 25-12n-11w, wod 250 ft.

RAPIDES PARISH—F. W. Martin's Hill 1, 24-5n-4w, fsg 580 ft. R. D. Webb's Brasher 1, 22-4n-2w, sd 5255 ft.

SABINE PARISH—Deep Rock Oil Co. et al's Whitney Corp. 1, 8-9n-13w, top Travis Peak 7090 ft, dr 7128 ft shale. E. Howard's Sabine Lbr. Co. 1, ne nw 24-9n-12w, rur. Romine et al's La. Long Leaf Lbr. Co. 1, 7-5-12, mir.

TENSAS PARISH — Ark. La. Gas Co.'s Hardwood Timber Co. 1, 8-11n-10e, sd 3080 ft. Sherrouse & Snyder's Chicago Mill & Lbr. Co. 1, 30-12n-10e, owdd, 798 ft.

WEBSTER PARISH — Magnolia's D. G. Cox 2, 22-21n-10w, coring 8150 ft; Ira Cox 6, 23-21n-10w, dr 7070 ft; G. W. Cole 2, 27-21n-10w, dr 7382 ft; A. J. McCook 2, 22-21n-10w, dr 5628 ft. Ohio's L. M. Gardner 1, 22-21n-10w, dr 8142 ft; A. J. Hodges 2, 23-21n-10w, killed after threatening to crater, td 8517 ft. Ohio's S. P. D. Coyle, 23-21n-10w, dr testing, td 8452 ft. Crichton-Coyle 1, 21-21n-10w, dr 3040 ft; T. Crichton 1, 21-21n-10w, spd; R. L. Holloway B7, 23-21n-10w, dr 4952 ft. Woodley's R. C. Cox B-2, dr 7040 ft. Bay Oil Co.'s A. J. Oliphant 1, ne ne 34-21n-10w, spd. Standard of La.'s E. L. Stewart 1, 32-21n-10w, dr 7834 ft shale.

WEST CARROLL PARISH—Rodessa O&G Co.'s Neely 1, se sw 19-20n-11e, dr 2021 ft.

SOUTH LOUISIANA

ACADIA PARISH—Humble's Federal Land Bank 1, North Crowley prospect, 34-8s-1e, dr shale 8553 ft. John Mayo et al's Bank of Commerce 1, e of Tepetate field, 19-7s-1e, dr shale and hard sand 7959 ft.

CAMERON PARISH—Humble's Bell-Hanszen 1, Hanszen prospect, 5-12s-6w, dr shale 8513 ft. Same operator's Miami Corp. 1, Prema area, 8-14s-5w, lcn. Pure's State Mallard Bay 2, Mallard Bay prospect, 14-13s-3w, driving piling. Superior's State Gulf of Mexico 1, in Gulf of Mexico, 4-15s-8w, driving piling.

EAST BATON ROUGE PARISH—Louisiana Crusader Oil Co.'s State 2, University block, 65-7s-1w, dr water sand 7908 ft. Cavalier Oil Co.'s Elliott 1, n of Hope Villa, 3-8s-2e, repairing dk 6115 ft.

EVANGELINE PARISH — Continental's Tate 1, Villa Platte area, 44-3s-2e, dr shale 4576 ft.

IBERIA PARISH—Jefferson Lake's Lake Peigneur 414, Lake Peigneur prospect, 12s-5e, setting csg 7069 ft.

JEFFERSON DAVIS PARISH—Louisiana Crusader Oil Co.'s Langley 1, Fenton area, 36-7s-5w, testing 6575 ft. Stanolind's Calcasieu National Bank B-2, China prospect, 28-7s-3w, dr shale 8920 ft. Union Sulphur's T. R. S. Farms 1, South Roanoke area, 23-10s-4w, dr shale 8156 ft.

LAFOURCHE PARISH—Fohs Oil Co.'s State Long Lake 1, in Long Lake, 65-17s-19e, Gulf's State 3, sw of Marchland, 36-23s-21e, ru.

PLAQUEMINES PARISH—Gulf's Quarantine Bay QQ 3, 36-23s-21e, dr shale 1410 ft. Tide Water's Manhatten Fruit Co. 3, Venice dome, setting csg 7208 ft.

ST. BERNARD PARISH—Gulf's Lake Lery 2, Lake Lery prospect, 28-14s-14e, reaming 6664 ft. Southern Sulphur Co.'s State 2, in Lake Borgne, 38-14s-15e, no report.

ST. CHARLES PARISH—Amerada-Louisiana Land & Exploration Co.'s State 1, Black Prince Island prospect, 13-15s-20e, fsh 8397 ft.

ST. LANDRY PARISH—Gulf's Haas Hirsch 1, Krotz Springs area, 12-6s-7e, dr shale 6636 ft.

ST. MARTIN PARISH—Texas Co.'s State 3, Lake Mongouloi prospect, 14-10s-9e, woc 6720 ft.

ST. MARY PARISH—Texas Co.'s State Bateman Lake 1, Morgan City prospect, 21-16s-12e, fsh 10,541 ft; State Horseshoe Bayou 1, on Horseshoe Bayou, 40-7s-9e, cleaning hole at 10,981 ft.

VERMILION PARISH—Continental's Brookshire 1, Abbeville area, 66-12s-3e, dr shale 8485 ft.

MISSISSIPPI

BOLIVAR COUNTY—Phillips Pet. Co.'s Perthshire 1, 2-24n-7w, cemtd 10-in csg 1062 ft, woc. White & Jones' Ballou 1, ne ne 18-24n-7w, rebldg dk, td 1680 ft.

GEORGE COUNTY—Cleve Love et al's J. J. Newman Lbr. Co. 1, c sw 9-1s-8w, installed heavier rig, dr 3775 ft.

HARRISON COUNTY—G. A. Hesse et al's Hingen 1, c ne 12-7s-10w, elev 69 ft, install heavier rig, td 2332 ft.

LAMAR COUNTY—Sun Oil Co. et al's Mrs.

(see opposite page)
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K. Talley 3, 33-4n-15w, elev 388 ft, dr 4717 ft, Midway shale.

MADISON COUNTY—Sun Oil Co. et al's J. E. Wilson 1, se se 1-8n-2w, elev 218 ft, sd 50 ft laying water line.

PIKE COUNTY — Acadian Prod. Corp.'s Bales 1, c se nw 24-7n-2w, dk.

SIMPSON COUNTY—Goodwill O&G Co.'s Berry 1, 33-2n-4e, rur and sd.

SUNFLOWER COUNTY — Phillips Pet. Co.'s Dockery 1, sw ne 27-22n-4w, rur.

WILKINSON COUNTY—Chas. Green et al's Taylor 1, c sw 4-3n-1e, rur. A. B. Taylor et al's Miss-Wis L&T Co. 1, nw sw sw recemnt 16-in csg 75 ft.

YALABOUSHA COUNTY — Skuna Dev. Co.'s Mrs. T. A. Turner 1, se sw ne 26-25n-6e, sd 300 ft.

MICHIGAN

ALLEGAN COUNTY—Champion Dev.'s Siko 1, sec 9-1n-12w, lcn. Hubel Oil Co.'s Madalinski 1, sec 18-1n-13w, lcn. Flanigan & Kehlet's Clair 1, sec 29-1n-13w, testing, swab, acid, 1356 ft.

ARENAC COUNTY—Gordon Oil Co.'s State B1, sec 2-19n-3e, dr 1890 ft. E. H. Linaberry's McTaggart 1, sec 26-19n-3e, sd 1900 ft.

CASS COUNTY—L. T. Barber's Beebe 1, sec 3-5s-15w, csd 5-in 1644 ft. Wayne Oil Co.'s Gebhard 1, sec 34-5s-15w, dr 200 ft.

CLARE COUNTY—Pure Oil Co.'s Apel 1, sec 31-19n-5w, mim. J. A. Pierce's Mortenson 1, sec 9-18n-5w, dr 1100 ft.

GLADWIN COUNTY—Harold Hand's Smart 1, sec 29-17n-2e, spd. Union Oil Co.'s Steel 1, sec 22-20n-1e, dr 1700 ft. Dibble Bros.' Kimble 1, sec 16-18n-1e, sd 1700 ft. W. H. Thourby's Kliz 1, sec 28-18n-1e, lcn. Dapar Oil Co.'s Villeneuve 1, sec 11-20n-2w, rig.

GRATIOT COUNTY—Sam Siegel's Kerr 1, sec 36-10n-1w, sd 2250 ft. H. B. Cowdry's DeVuyst 1, sec 11-10n-2w, dr 1500 ft. Gulf Refining Co.'s Lyons 1, sec 26-9n-2w, sd 2920 ft.

NEWAYGO COUNTY—M. R. Schemahorn's Cain 1, sec 24-12n-11w, lcn. Muskegon Dev. Co.'s Carlson 1, sec 9-16n-12w, fsh 1300 ft.

OTSEGO COUNTY—D. Geraldine's Fee 1, sec 34-30n-3w, lcn. Harley Williams' Raae 1, sec 15-30n-1w, sd 2250 ft. Barton & Williams' Yuill 1, sec 9-32n-3w, dr 200 ft.

SAGINAW COUNTY—Mid-West Pet. Co.'s Shield 1, sec 5-11n-2e, testing Berea after shot, so 2136 ft. Darke Bros.' Hart 1, sec 11-11n-3e, dr 2700 ft. Doran & Hilliard's Dobs 1, sec 33-11n-1e, sd 875 ft.

OKLAHOMA

ALFALFA COUNTY—Olson Drlg. Co. et al's Acre 1, csw ne 14-24n-11w, fsg 4000 ft.

BECKHAM COUNTY — Mid-American Oil Co.'s Biscoe 1-A, sw sw sw 28-8n-22w, dr 2675 ft.

CADDO COUNTY—Clyde Becker et al's Pharris 1, cse se nw 24-6n-12w, dr 5200 ft.

CARTER COUNTY — Shell Pet. Corp.'s Smith 1, cnw se ne 30-5s-1e, sdo 4222 ft.

CLEVELAND COUNTY—Hollenback's Stinson 1, nw nw ne 17-9n-2w, fsg. Hollenback et al's Ward 1, sw se ne 30-7n-1e, dg cel and pits.

COMANCHE COUNTY — C. V. Morris' Young 1, se ne se 24-3n-10w, dr 1000 ft. Holliday's Kuntz 1-A, cse ne se 21-4n-11w, sd 2750 ft.

COTTON COUNTY—I. T. I. O. Co.'s Collins 1, ne ne ne 18-4s-10w, pits.

CREEK COUNTY—Continental Oil et al's Community 1, ne ne sw 7-15n-7e, lcn. Mosier et al's Holcomb 1, se sw ne 19-18n-8e, dr 2990 ft, hfw. Jackson's Alberty 1, ne ne nw 25-18n-9e, rig.

GARFIELD COUNTY — Ohio Oil Co.'s State 1, sw sw sw 13-23n-2w, bail acid wtr at 3600 ft, ssg.

GARVIN COUNTY—Carter Oil Co.'s Potts 1, ce ½ se nw 36-1n-3w, dr 834 ft. Nels-Bufton et al's J. E. Burch 1, se se sw 3-3n-1w, set 12-in csg 130 ft, woc.

GRADY COUNTY—Gulf Oil Corp.'s Thomas 1, sw nw nw 14-4n-5w, dr 2570 ft.

GRANT COUNTY—Carter Oil Co. et al's Crisman 1, nw sw nw 16-25n-3w, dr 4132 ft. Carter Oil et al's Kolarik 1, csl s ½ sw 4-28n-5w, dr 5036 ft.

HASKELL COUNTY—Continental Oil Co.'s Anderson 1, sw se ne 33-8n-20e, dr 5556 ft.

HUGHES COUNTY—Chas. Thornton's Eason 1, ne ne nw 7-9n-11e, sd 3460 ft. E. H. Moore's Buck 1, nw sw sw 21-8n-10e, td 2903 ft, pull 8-in csg to fish. Moroney & Healey's Field 1, cnw sw 11-9n-11e, fsg 2780 ft. The Texas Co.'s Cox 1, ne nw nw 23-9n-8e, woc. W. O. Allen's Barnard 1, sw sw sw 24-8n-8e, dr 1500 ft.

JACKSON COUNTY—Ace Gutowsky's Howard 1, sw sw nw 10-3n-19w, sdo 891 ft. Ernet Lippert et al's Miller 1, nw nw nw 4-2n-18w, spd and sd.

JOHNSTON COUNTY—Neff & Godfrey's Chapman 1, csw se sw 36-4s-4e, td 127 ft. Patton et al's McCrummens 1, sw sw ne 16-1s-6e, sd 1165 ft.

KIOWA COUNTY—Kiowa Oil Corp.'s Finder 1, csw ne 4-6n-20w, sd 940 ft. Ace Gutowsky's Booker 1, nw nw nw 33-2n-18w, sd 510 ft. McWherter & Francis' Padgett 1, ne nw se 3-5n-17w, td 511 ft, D&A.

LATIMER COUNTY—Clark Drlg. Co. et al's Wilson 1, cse se 15-5n-18e, sdo 6515 ft.

LINCOLN COUNTY—Ross Oil Co.'s Bailey 1, se se se 22-15n-6e, dr plg. Cimmaron Oil Corp.'s Frank Orner 1, csw se 31-17n-2e, dr 1295 ft.

LOGAN COUNTY—Freeland et al's Woods 1, se se sw 27-17n-1e, rog. Shell et al's Waddle 1, sw se nw 36-15n-4w, woc 325 ft. Sunray & Olson Drlg. Co.'s Canning 1, sw sw ne 31-17n-1w, dg cel.

LOVE COUNTY—Sinclair Prairie's Stockton 1, se se sw 26-6s-2w, sd 6927 ft.

MAJOR COUNTY—Ed V. Parsons et al's Patzkowsky 1, cnw ¼ 10-20n-11w, rig.

MARSHALL COUNTY—Stewart & Taylor's Chestnut 1, ne ne ne 23-8s-5e, sd 782 ft. Stewart & Taylor's Chestnut 2, ne ne ne 23-8s-5e, dr 410 ft (offset).

McCURTAIN COUNTY — Wilcox O&G Co.'s No. 1, sw se sw 30-2s-27e, dr 650 ft.

MURRAY COUNTY—O. O. Owens' Fryer 1, ne se ne 34-1s-3e, sd 2574 ft. Power Oil Co.'s Lancaster Trust Co. 1, csw ne 10-1s-2e, td 3438 ft, pb to 3175 ft, enlarging C&P.

NOBLE COUNTY—Lincoln Oil Co. et al's Neil 1-A, ne ne ne 15-23n-2w, dr 4876 ft. Stanolind & Amerada's Johnson 1, nw nw se 4-20n-2w, woc. Herndon Drlg. Co.'s Baggett 1, se se se 13-21n-3e, rig.

OKFUSKEE COUNTY—Riverland Oil Co.'s Board 1, ne nw se 10-13n-10e, dr 2100 ft. Burke-Greis' Rhea 1, sw sw se 14-10n-9e, rust. F. W. Merrick's Mackey 1, ne ne sw 29-11n-10e, spd.

OKLAHOMA COUNTY—Sunray Oil Co.'s Dickson 1, nw nw nw 17-11n-1e, td 6524 ft, D&A. Frank Buttram et al's Cole 1, nw nw nw 16-14n-1e, dg cel.

PAWNEE COUNTY — Carter Oil Co.'s Wells 1, ce ½ se nw 30-23n-5e, dr 1760 ft.

PAYNE COUNTY—H. F. Young's Jenkins 1, se ne se 4-17n-3e, dr 4595 ft.

PONTOTOC COUNTY—Southern Oil Co.'s Young 1, ne ne se 17-3n-7e, td 840 ft, lower-

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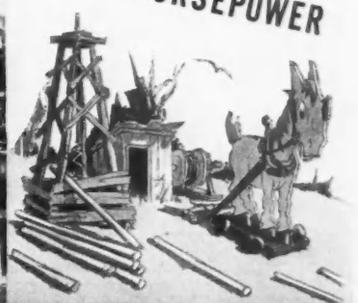

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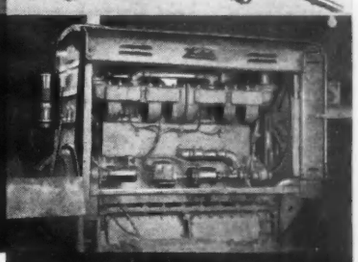

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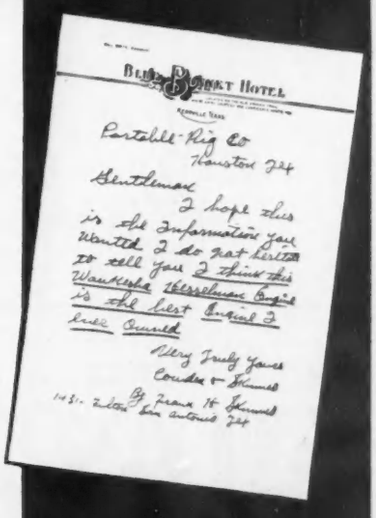
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ing 11-in csg. Roodhouse et al's Booth 1, se nw se 20-2n-6e, td 4966 ft, to pb. Clark Drlg. Co. & Delaney's Richardson 1, se se sw 30-4n-8e, dr 4065 ft. Boettcher O&G Co.'s Gann 1, se nw ne 25-4n-7e, sd 3170 ft. Norbla Oil Co.'s Kennedy 1, se se ne 13-2n-5e, dr 1031 ft. Union Dev. Co.'s Abbott 1, sw nw ne 34-3n-6e, dr 1123 ft. W. E. Delaney et al's Payton 1, ne ne se 1-4n-7e, dr 3245 ft.

POTTAWATOMIE COUNTY—Stanolind & Amerada's Billington 1, sw se sw 32-9n-3e, swabbing. Richborn Oil Co.'s Fidler 1, ne ne nw 9-5n-5e, sd. Atlantic Ref. Co.'s Dooley 1, se se sw 9-11n-5e, cor. Mid-Continent Pet. Corp. et al's Ne-Thah-Pea-Se 1, se se ne 24-11n-4e, dp stuck at 3700 ft. C. H. Yookums' No. 1, se se ne 27-6n-4e, C&P.

PUSHMATAHA COUNTY—Erle Halliburton et al's Bogwell 1, sw ne ne 30-3s-15e, dr 3345 ft.

SEMINOLE COUNTY—Mid-Continent Pet. Corp.'s Schrupp 1, sw nw sw 24-5n-6e, td 3185 ft, D&A.

STEPHENS COUNTY—Carter Oil Co. et al's Harley 1, cne ne 24-2s-4w, dr 6645 ft. Coline Oil Co.'s Johnson 1, csw se ne 1-2n-8w, dr 7005 ft. Ed Parsons et al's Blake 1, csw nw 22-2n-8w, dr 4125 ft. Helmerich & Payne's Graham 1, csw sw ne 12-1n-5w, si for tanks.

TILLMAN COUNTY—I. T. I. O. Co. et al's Hatler 1, csw ne 32-2s-17w, pumping. Cavens et al's Southerlander 1, sw sw nw 35-4s-16w, ru and sd. Tom Walker's Bowman 1, sw sw nw 10-4s-17w, woc at 20 ft.

WASHITA COUNTY — John Koberg's Harms 1, cnw nw ne 6-10n-16w, dr 1540 ft.

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SOUTH TEXAS

CORPUS CHRISTI DISTRICT

ARANSAS COUNTY—Barnsdall Oil Co.'s Kate Edwards 1-A, Wm. Lewis sur, dr 9025 ft.

BROOKS COUNTY—Standard Oil Co. of Texas' Mestina Oil & Gas Co. 1, R. G. Salinas sur, shale started heaving, cut off circulation, trying to clear hole, td 6753 ft; Mestina Oil & Gas Co. 8, tr 5, La Mestina y Gonzalena gr, still wor.

CAMERON COUNTY—Ruez-Morton Inc.'s United Land Irr. Co. 1, blk 402, El Jardin sub, sd for orders at 6000 ft. Stapper Pet. Corp.'s Port Isabel Irr. Co. 1, blk 17, Port Isabel Irr. Co., sd, likely will abnd, td 8000 ft.

GOLIAD COUNTY — Brown & Wheeler Inc.'s J. R. Kauffman 1-D, P. Trevino sur, flowing about 8 bbls per day ⅛-in ch, tubing pressure 600 lbs, csg pressure 600 lbs, csg perforated 4373-92 ft, abnd, td 4554 ft. Dirks Bros.' Dr. G. W. Allen 1-A, Obid Marshall sur, sd for orders, td 4550 ft. Goliad Oil Co.'s S. E. Cole 1-A, lot 33, range 4, Goliad Town tr, dr 3862 ft.

HIDALGO COUNTY—Dayle L. Smith Oil Co.'s Fairbands & Young 1, blk 14, por 46, reinstate reaming down to dd, td corrected to 2169 ft.

JACKSON COUNTY—Cockburn Oil & T. Hargrove's Santa Theresa Farms 1, I&GN sur, abnd dry after running electric formation tester, td 6506 ft. George J. Greer et al's J. R. Davis 1, D. H. Hoffman sur, drilling 5422 ft.

JIM WELLS COUNTY—John F. Camp Dr. Co.'s W. E. Pope 2-B, Richard King Farm Lots 13, drilling 5480 ft, sw in 5400 ft snd. Magnolia Pet. Co. et al's A. A. Seeligson 7, Los Jabon-cillo sur, cor gas sand topped at 5998 ft, td 6005 ft. Smith Dr. Co.'s W. D. Wade 2, ¼ mi east of No. 1, dr 2600 ft, Tsesmelis & Reese's Martha Earhart 1, John Suggs sur, perf 2173-81 ft with 11 shots, comp 40 mcf gas, csg pressure 900 lbs, td 4005 ft. Wellington Oil Co.'s Clara Driscoll Sevier 1, La Anima Sola gr, ab 545, abnd at 6510 ft.

KARNES COUNTY—Pettus O. & R. Co.'s Mrs. R. A. McKinney 1-A, R. C. Ballard sur, ru.

KLEBERG COUNTY—John F. Camp Prod. Co.'s C. Phillips Wardner Trs. 3 (changed from No. 2), Paco Ancho de Arriba gr, wor. W. L. Hinds Co.'s D. M. Murchison 1, KT&I subd, J. J. McRoberts block, sp & comp ru.

LIVE OAK COUNTY—W. M. Brown's W. Moozygamba 1, blk A, George West subd, lcn. Henshaw Bros. & Walter C. Nelson's Alfred Wesch 1, R. Tripplet sur No. 150, dr wtr well. Loma Oil Co.'s L. Jacob Corp. 8-B, GH&H sur, d&a 1090 ft; Schwartz 1, Mark Killeley sur, abnd 1675 ft.

NUECES COUNTY—Mills Bennett Prod. Co.'s William Heuerman 1, C. Land sur, abnd 6403 ft. J. K. Culton's I. M. Singer 1, lot 13, blk 39, abnd 7010 ft. Fain Gillock et al's Robt. Poenisch 1, lot 11, sec 32, Flour Bluff & Encinal Gardens tr, lcn. Robt. Poenisch 2, Lots 7 & 8 blk 32 Flour Bluff and Encinal Gardens tr, dr below 300 ft. W. L. Hinds' Lucy J. Rivers 1, sec 301, Bishop subd, dr sh, ran electric formation tester 6015 ft. Seaboard Oil Corp. of Delaware's J. O. Chapman et al 1-C, sec 111 Laureles Farm tr, El Rincon de Corpus Christi gr, dr 1550 ft. Seaboard Oil Corp.'s Ed. Jurica 1, W. J. Robertson Farm tr in Rincon Del Oso gr, moving in materials, owdd, abnd in 1934, sand with gas odor 3440-57 ft, td 5554 ft. Southern Minerals Corp.'s Richard King 1, sec 32 King Farm Lots, abnd 7564 ft; H. G. Yakey 1, sec 38 King Ranch subd, mir. Taylor Pet. Co.'s J. V. Styles 1, sec 18, I. Z. Bishop subd of Petronilla gr, abnd after running electric formation tester and no shows encountered, td 7022 ft. United Prod. Corp.'s W. H. Harvey 1, Garcia sur, temp abnd 9002 ft.

REFUGIO COUNTY—J. V. Chew & O. V. McIntire's F. E. Kloesel 1, sec 11, Bonnie View Ranch subd, will move in shortly. Edwin M. Jones' Ben Shelton 1, Texas Co. lease, Refugio Town gr, dr 6900 ft. Randon Oil Co. & American Liberty Co.'s J. Vincent 1, CEIP&M sur 41, dr below sur csg 1660 ft. United Prod. Co.'s J. J. O'Brien 12, pb after testing water in 7900 ft perforations, td 9225 ft.

SAN PATRICIO COUNTY — Danrey Oil Co.'s Jean Davis 1, Wm. Boyd sur, dr around 4500 ft, water shortage slowing progress. Eleanor Oil Co.'s J. F. Green Est. 1, T. T. Williamson sur, cem off perf 6572-82 ft, reperforated, plugged back after testing dry through perf, td 7305 ft. Humble O. & R. Co.'s John S. McCampbell 1, R. Martinez sur, dr sandy sh 6234 ft. Plymouth Oil Co.'s J. F. Odem 1-A, Archibald Herron sur, dr 5000 ft. Wellington Oil Co.'s James F. Welder 1-B, Julian de la Garza gr, sec 5, Cubage & Miller sub, dr 3500 ft.

VICTORIA COUNTY—Magnolia Pet. Co.'s Mrs. Meta Beck 1, T&NO RR sur 1, cor 2750 ft. Transwestern Oil Co.'s A. M. McFaddin 3, J. Viarin sur, perf 5193-96 ft, dst 375 lbs, no fluid ¼ and ⅜-in ch 7 min, running tbg, td 6231 ft.

WILLACY COUNTY—Ruez-Morton Inc.'s Francisco Armendiaz 1, San Juan de Carricitos gr, drk; Johnson-Stillman 1, blk 25, lot 14, sh 44, sd 650 ft. Shell Pet. Co.'s Yturria Lnd. & C. Co. 1, sh 64, San Juan de Carritos gr, testing tool stuck, now fshg, pb to 7756 ft, td 10,286 ft.

SAN ANTONIO DISTRICT

ATASCOSA COUNTY—Priest et al's Birdwell 1, J. P. Gorman sur, sd 1725 ft.

BASTROP COUNTY—Sherman Nelson's K. M. Litton 1, Addison Litton sur, sp.

BEXAR COUNTY—Algra Oil Co.'s Edward G. Peters 1, Miguel Gotari sur, still wo pump to dd, td 815 ft. American Gas Co.'s Oliver 5, M. F. Rodriguez sur, dr lime, lowered 5-3/16-in csg to 3440 ft, td 3478 ft. Carter & Ingersoll's Louis Mann 1, Stephen Jett sur 53, abnd 1357 ft, making new location. Dewey et al's C. A. Weeber 1, Juan Montes sur, sd 21 ft. Edna May Oil Co.'s Mrs. C. N. Cassin 1, Fernando Rodriguez sur, rigged up, wait on gas line, will sp soon. L. K. Oil Co.'s William A. Russell 1, Fernando Rodriguez sur, prep set csg top ch 1104 ft, td 1116 ft.

BLANCO COUNTY—D. N. Johnson's W. D. Glasscock 1, W. D. Stannock sur, ru spudder. E. L. Nixon's H. Hohenberger 2, Adolph Jonas sur, move off rig, to be sd for 60 days, will move in large rig, to dd to 1800 ft. H. T. Roe's Polk Morrisey 4, Thos. H. Webb sur 91, sp.

CALDWELL COUNTY—Allbright et al's C. P. Smith 1, James Berry sur, dr 750 ft. B. C. Arnstrong et al's Wilson Bell 1, J. L. Harris tr, mir. H. Y. Baker's F. Smith 1, R. Davidson sur, cor dh 2950 ft. R. T. Belcher's Mrs. G. Moody 1, Solomon Seal sur, mir this week. Fain Gillock's Mrs. J. P. Walker 1, A. Floyd sur, sd 20 ft. W. E. Housel et al's M. C. Driscoll 1, James Berry sur, sd 1544 ft. J. O. Mack's B. Withers 1, W. House sur, sd 1500 ft Richardson Pet. Co.'s Patterson 1, Wm. Pettus sur, d&a 780 ft; J. M. Tremmell 1, E. Berry sur, dr top Austin chalk 2031 ft, td 2210 ft. Rosita Oil Co.'s Lockhart State Bank 1, John Roe sur, pumping and flowing 33 pbh, td 2204 ft. Spokane Oklahoma O. & G. Co.'s K. Dougherty 1, J. Tyler sur, dr 1250 ft. Stapper Pet. Co.'s M. August 1, A. Floyd sur, prep to mi. F. R. Williams' H. L. Rodenberg 1, James Berry sur, reacidizing, td 2010 ft. Witherspoon Oil Co.'s C. P. Ross 1, Wm. Shupe sur, drk.

DIMMITT COUNTY—Paul C. Teas & Maryland Oil Corp.'s S. E. McKnight 1, sec 23, I&GN sur, have not started yet. Wilcox Oil & Gas Co.'s Light Ranch 1, I&GN sur No. 527, dr 7650 ft.

EDWARDS COUNTY—Amon G. Carter et al's Frank J. Sweeten Ranch 1, GC&SF sur, dr 710 ft.

FRIO COUNTY—Amerada Pet. Co.'s Mrs. D. D. Harrigon 1, Salvador Flores sur 306, fsh 6410 ft. H. A. Pagenkopf & L. C. Jamieson's Blackaller Est. 1, James Gourley sur 765, dr ch gas shows td 2530 ft.

GUADALUPE COUNTY—Ralph E. Fair Inc.'s Fritz E. Hemple 1, G. W. Williams sur, now swabbing, swabbed 8 to 10 bbls of oil, little sw, td 2240 ft. Kennedy & Crowley's Gus Jahns 1, Jose K. Davis sur, ru new pump unit testing again, td 2507 ft. W. Scott Townsend's Tom Terrill 1, Jesus Cantu sur, dr 2030 ft.

HAYS COUNTY—Mallory-Holcomb & Nance's J. A. Hudenrich 1, W. Hemphill sur, base chalk 450 ft, set 650 ft of 4-in, sd at 650 ft. N. G. Williams' Frances Jennings 1, Venmonds sur, lcn.

KENDALL COUNTY—J. E. Landon & C. F. Peffley's C. A. Sidensticker 1, sur 257, ru.

MAVERICK COUNTY — Rio Dev. Co.'s State Bank & Trust Co. 4, blk 16, sur 1, lcn; P. W. Thompson Est. 1, blk 16, sur 5, ru.

MILAM COUNTY — Kingdorr Exploration Co.'s J. C. White et al's 1, Bynum Wickson sur, dr 3622 ft. Minerva Ref. Co.'s Shelton Estate 3, Wm. Allen sur, no record.

TRAVIS COUNTY—J. F. Jourdan's Dr. J. V. Siegmund 1, A. M. Leavy sur, dr 775 ft. R. M. Kyle's W. K. Hunter 1, J. Burleson sur, still sd at 228 ft.

WILSON COUNTY—R. C. Stanley's E. M. Hierholzer 2, R. Salinas sur, bailed some fresh water, recement, td 1031½ ft.

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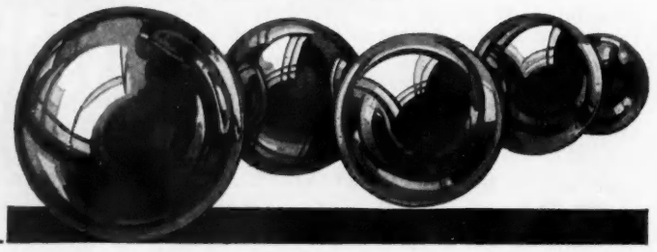

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LAREDO DISTRICT

DUVAL COUNTY—Government Wells Oil Co. Inc.'s H. A. Lundell 2, sec 140, comp 23 bbls per hr ⅛-in ch, tubg pressure 110, csg pressure 375 lbs, td 1528. Hiawatha O. & G. Co.'s Southland Life Ins. 3, sec 15, Ball Ranch subd, Santos Flores gr, dr 4410 ft. King Drilling Co.'s Atlee Parr 1, San Andres gr, in sndy sh at 6202 ft. Lockhart Bros.' Atlee Parr 1, sec 277, prep to sp. Magnolia Pet. Co.'s Duval County Ranch Company 2, sur 58, ru; F. Weil et al 1, sur 565, abnd 4073 ft. Navarro Oil Co.'s E. M. Rossi 1, sec 11, Sweden subd, Santos Flores gr, coring 5480 ft. Cockfield 5430-45 ft, faint odor. Penn-Palangana Oil Co. et al's C. K. Gravis 1, sec 254, dr 4750 ft. Reynosa Oil Co.'s W. R. Peters 1, sur 37, lcn. Standard Oil Co. of Kansas' Atlee Parr 1, Parr Tr, San Andres gr, comp flowed est 4 bph through 5/32-in ch, tp 425 lbs, cp 750 lbs, td 4747 ft; Mabel Rossi 1, blk 10, Sweden subd, Santos Flores gr, dr 3460 ft; V. L. Rossi 1-A, sec 19, Sweden subd, Santos Flores gr, lcn. Trahan & Tuttle's J. C. Megerle 1, sur 245, still sd at 1100 ft.

JIM HOGG COUNTY—Magnolia Pet. Co.'s Merchants Bank 43, CB&NG sur, abnd 2226 ft.

McMULLEN COUNTY—Edwards & Zoch's Two Rivers Ranch 1, sec 60 of Two Rivers Ranch, cut snd 1100-02, waiting on commercial mud before coring ahead, show some gas, reported to be a trace of oil in mud, td 1102 ft. Harvey & Henderson's Nueces Land & Livestock Co. 1, sec 105, dr 500 ft. W. L. Hinds' Douglas W. Rhodes 1, H. Nadler sur, sd 860 ft. W. P. Howard's B. C. Claunch 9, M. Hely sur, lcn. Howell Oil Co.'s Kate Martin 1, D. Estep sur 213, snd appears to have good saturation, waiting on orders, may run electric formation tester, td 2910 ft. Edwin M. Jones' Harry Ezzell Ranch 5, sec 39, H. M. Brewer sur 7, dr 2461 ft; Harry Ezzell 6, G. Q. Ragland sur, sd for wtr 1050 ft. J. T. Lanier's E. R. Hagist 1, sur 481, sd 1503 ft. Rowan & Nichols' Douglas W. Rhodes 1, M. F. Lowe sur, sd 1800 ft. C. C. Shumway et al's Shiner Ranch 10, sec 51, Shiner subd of Shiner Ranch, cored sand 1575-84 ft, prep to test, td 1584 ft.

STARR COUNTY—Calderoni-James-Follette's Francisco Rodriguez 1, por 80, sh 56, J. of Camargo, sd 150 ft. Danrey Oil Co.'s Cayetano Ramos 2, sur 149, sp. Gilcrease Oil Co.'s De Castillo 1, por 77, center of lot 9, Walder subd of sh, sd for orders 783 ft. C. M. DeCastillo 2, sh 7-D, por 77, mim. E. A. Graham & King-Wood Oil Co.'s Yturria Land & Livestock Co. 1, por 38, sp and set sur csg, td 300 ft. Henry Mode et al's Kelsey Bass 1, blk 7, Kelsey Bass sub, por 86-87, dr 3100 ft. Palmetta Oil Co.'s (Carter & Stiernberg) Quirino Vela 1, lot 1, blk 4 of El Tangua Ranch subd, por 85, dr 1635 ft; Quirino Vela 2, lot 9, por 84 & 85, El Tangue subd, dr 1450 ft. The Texas Co.'s A. V. Guerra 6-A, J. of Mier, dr 1250 ft. Transwestern Oil Corp.'s T. B. Slick Est. 3, sur 226, mim.

WEBB COUNTY—Bridwell Oil Co.'s S. Benavides 1, sec 691, abnd 3610 ft. Eugene Garner Jr.'s R. Saldivar 2, sur 657, bailing some 37 gr oil, no wtr after recementing, td 1000 ft. O. W. Killam's A. M. Bruni Est. 2, blk 83, Borrego gr, El Ranchito tr, lcn; D. G. Garcia 7, sur 786, dr 1000 ft. Lutex Oil Co.'s Lone Star Con. Co. 2-A, por 12, dr 3100 ft. J. W. Magee's E. Garcia 1, Henry James subd, resume dr 40 ft. Paul Meaders et al's Garcia & Villareal 1, blk 5, sec 338, lcn. Howard Nessley's A. M. Bruni Est. 3, sur 449, lcn. Perkins, Cullum & Achning's Louisa R. de Garza 1, sur 711, abnd 2710 ft. Randon Oil Co.'s Joe C. Palmer 1, sur 474, ru & sd to clear titles.

ZAPATA COUNTY—Allison & Abrams' S. Vela 1, sur 259, dr 710 ft. Gilcrease Oil Co.'s Antonio Trevino 2, blk 12, sec 8, por 2 & 3, sd 2150 ft. O. W. Killam's A. M. Bruni Est. 1, blk 83, Killam subd, El Ranchito pasture, E. V. Borrego gr, dr 489 ft. Ray L. Martin's S. Vela 1, blk 44, sh 2, El Grullo gr, lcn. J. O. Sheffield's C. H. Buck 1, blk 15, J. O. Sheffield's C. H. Buck sur 273, coring 2135 ft. Starr Dev. Co.'s Paula V. de Garza 1, blk 34, C. A. Douglas subd, abnd 1865 ft.

EAST TEXAS BORDER COUNTIES

HARRISON COUNTY—J. B. Bond's Martin 1, Martin sur, 16-in csg 80 ft.

MARION COUNTY—Ark. La. Gas Co.'s C. C. Braden 1, Thos. Hansen sur, elev 211 ft, pb to 5972 ft from old td 6870 ft, completed est 5 mil ft gas daily through quarter-inch choke in Gloyd; Allen Houston 1, A. de los Santos Coy sur, logged 36 ft sat coquina lime 6039-76 ft, 7-in csg 6035 ft, arr dr plug and test, td 6076 ft. The Hunter Co.'s E. W. Fonda 2, A. de los Santos Coy sur, testing delayed by explosion, later completed flowing 30 bbls hr 7/16 in tub choke, tub press 150, cas press 200, td 6096 ft. Fohs Oil Co.'s Mary McReynolds 1, A. de los Santos Coy sur, dr 5006 ft. Mid-Continent Pet. Co.'s Sory 1, A. de los Santos Coy sur, dr 5720 ft. United's J. H. Hutchinson 1, A. de los Santos Coy sur, dr 2527 ft. Ark. La. Gas Co.'s Fant 1, A. de los Santos Coy sur, dr 3640 ft.

PANOLA COUNTY—Danciger O&R Co.'s J. W. Tatum 1, Alfred Bissell sur, spd and laying gas line. Glassell & Glassell's Pierce & Chesbro 1, Julia Soape sur, heavy show gas 5881 ft, fsg, td 5881 ft. Magnolia Pet. Co.'s E. A. Hull 2, Thos. Applewhite sur, dr 6510 ft.

SHELBY COUNTY—Wm. Redditt et al's Pickering Lbr. Co. 1, Stephen English sur, elev 303 ft, top Blossom 2310 ft, est 5 mil ft gas after acidizing at 4109 ft, si, td 4109 ft (Paluxy). H. A. Stebbinger et al's Pickering Lbr. Co. 3, A. Hansen sur (700 ft s of No. 2) dk.

TEXAS GULF COAST

AUSTIN COUNTY—Cockburn & Hargrove's Bartay 1, w of Bellville, M. Steussy sur, abn 4004 ft.

BRAZORIA COUNTY — Pure's Slade 1, Peach Point prospect, S. F. Austin sur, hole caved 8055 ft.

FT. BEND COUNTY—Research Oil Co.'s Moore 1, ne of Orchard, S. Kennedy sur, fsh 4610 ft. Schwab & Gem Oil Co.'s Arcola Sugar Co. 1, Arcola prospect, D. Fitzgerald sur, abn 6540 ft.

HARRIS COUNTY—Humble's Settegast 1, Friendswood area, Perry & Austin sur, woc 6009 ft. Superior's Butler 1, Bammel area, J. Ehrhardt sur, dr shale 9486 ft.

JEFFERSON COUNTY—H. B. Hebert & S. Smith's Broussard Trust 1, Pine Island area, J. W. McGattey sur, dr shale 6899 ft.

MATAGORDA COUNTY — Continental's Hawkins 2, Sheppards Mott area, D. McCarthy sur, dr shale 5554 ft. Royal Oil Co.'s Ewing 1, Sugar Valley area, A. S. SoJourner sur, dr shale 8287 ft.

MONTGOMERY COUNTY — Texas Co.'s Crawford 1, Willis area, U. Springer sur, abn. 4620 ft.

NEWTON COUNTY—Houston Oil & Republic Prod. Co.'s Sabine Tram 1, Bunker Hill area, H. & T. C. sur, No. 35, ru.

SAN JACINTO COUNTY—Cockburn et al's Whitten Estate 1, Keno area, Wm. West sur, abn. 5611 ft.

WASHINGTON COUNTY—K. D. Harry & Starr's Ellerman 1, W. Bridges sur, sd 790 ft.

Brakes

The National Supply Company, Toledo, Ohio, has issued Bulletin No. 142 which supersedes Bulletin No. 91, covering the Ideal Draw Works Brakes, Type "K."

These draw works brakes are compound equalizing and are now standard equipment on all Ideal heavy-duty draw works.

These brakes employ a novel compound leverage mechanism which gives a high mechanical advantage without the feeling or danger of the brake linkage going "over center."

The leverage mechanism is assembled in a one-piece steel bracket, thus avoiding the deflections and strains common to a less rigid construction.

BRIGHT SPOT

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That's Why Oil Men Prefer ECOLITE 50S

Here is a safe, easy to handle, electric lantern that is just what pipemen, gaugers and other oil men need. It throws a strong, bright shaft of light, is safe in presence of inflammable gases, and is recommended by Underwriters' Laboratories. Used by most all leading Oil Companies.

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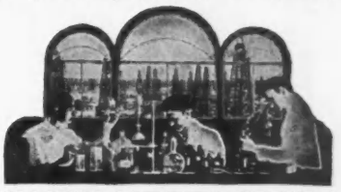
10 Sample Survey $50. Total Cost: Mid-West



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Analyses of oil field brines, cores, gas, oil, and minerals. Field gas testing. R. H. Fash, Vice-President; Long distance 138. 828½ Monroe Street, Fort Worth, Texas.

WANTED: Experienced, competent and responsible tool pusher; preferably man pushing tools for a drilling contractor. "Has Beens" or ambitious drillers need not apply as must have man already engaged in pushing tools. Steady work and good salary assured. Applications should be mailed to Box 736, care of Oil Weekly, Houston, Texas.

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(Reg. U. S. Pat. Off.)

HUMBLE

There are two grades of Humble Thredkote available at your local Humble Bulk Station. Thredkote No. 1, zinc filled, and Thredkote No. 2, graphite filled.

As tough and strong as tool joints are, they need a friend to share their hard knocks. And a tool joint's best friend is Humble Thredkote. From the bucking-on machine to the derrick floor, and on down into the hole, tool joints need the helpful three-point service of Humble Thredkote. By lubricating the threads, by sealing the joint, and by preventing rust formation, Humble Thredkote makes your tool joint's job a whole lot easier.

HUMBLE OIL & REFINING COMPANY

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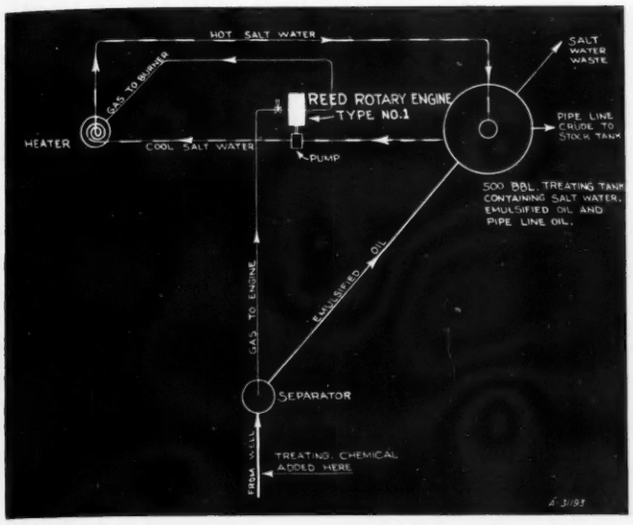
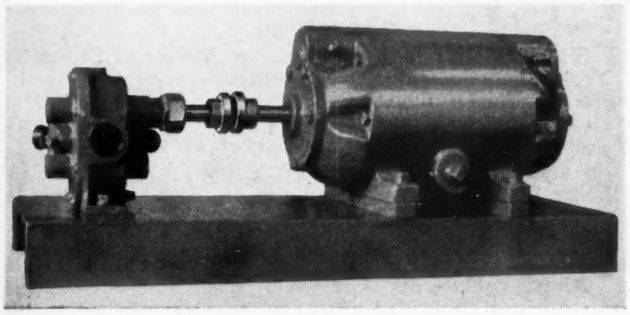
NEW PRODUCTS FOR THE FIELD
Machinery • Tools • Catalogs • Books

TREATING UNIT
Reed Roller Bit Company

Reed Roller Bit Company has announced a new bronze gear pump treating unit, which consists of a Reed rotary engine direct connected to a bronze gear pump, mounted upon a metal base.





Reed Treating System and Pump

This unit operates on gas pressure from the separator, driving the pump which circulates salt water from a treating tank, through a heater back into the tank. The exhaust gas from the engine is burned under the heater, therefore no gas is wasted.

A more flexible control of the temperature of the treating system is claimed. The use of a forced circulating system for treating, rather than a thermo-syphon, results in the elimination of frequent repairs to the heater and deposition of salt in the heater and lines.

REGULATOR
Natural Gas Equipment, Inc.

Natural Gas Equipment, Inc., Los Angeles, announces a new regulator for automatically firing oil field boilers. This regulator is designed to meet the need for closer control of steam pressure on drilling boilers and to provide accurate regulation of gas pressure on the burner. "Boilertrol," the name of this new regulator, is a combined steam-control regulator and reducing valve.

One regulator serves the purpose of both gas fuel regulator and reducing regulator. Fuel supply pressure changes are automatically compensated for and have no effect on the operation of the regulator or the boilers.

It is two valves in one. It acts as a reducing valve at all times in addition to varying gas burner pressure in accordance with steam demands upon the boiler. Owing to its pilot operated construction, it has a much greater actual usable capacity because it can open wide-open if necessary on a very slight steam pressure change. Not only has it a greater capacity, but also with the elimination of the second valve, such as a reducing valve, the available pressure drop is greater, which also makes for increased capacity.

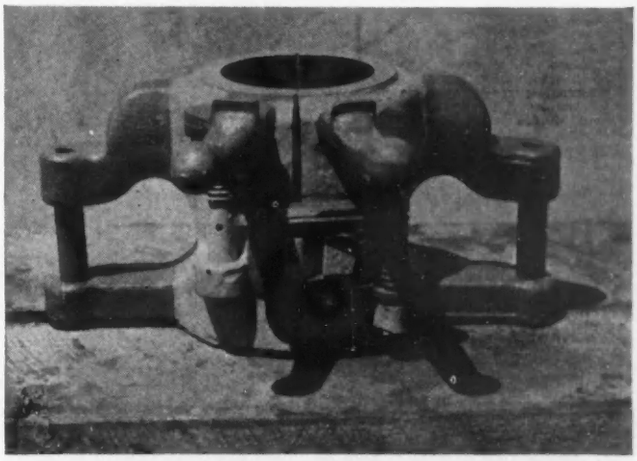
Type G-1000 Boilertrol Regulator for firing oil field boilers

Boilertrol is pilot operated and will maintain steam pressure within 3 pounds under extreme changes in load. The regulator is of the pressure-loaded type and will not surge, pulsate or override. Within this pressure-loaded and pilot-operated construction, there are no stuffing boxes employed so that friction is practically eliminated. The diaphragms of the pilot, which are subjected to the steam pressure, are of monel metal. The regulator controls the idling fire or minimum burner pressure, and it is readily adjustable for any desired maximum burner pressure regardless of upstream gas pressure or of variations in steam pressure.

ELEVATOR
United Iron Works

United Iron Works, Pittsburg, Kansas, is offering a new type of rotary and tubing elevator having two important features; one being that the tool joint can wear to almost a feather edge without causing injury to the elevator. A universal joint permits the elevator to move in a horizontal plane for opening and closing and in a vertical plane to rock on the drill pipe or tubing so that the force lifting the weight offsets the wedging action of the tool joint or tubing collar.

The second feature is the gate. By turning the left handle away from the operator it moves the finger which operates the gate from its seat clearing the lug and forcing the elevator to break away from the pipe, eliminating the



United Iron Works Elevator

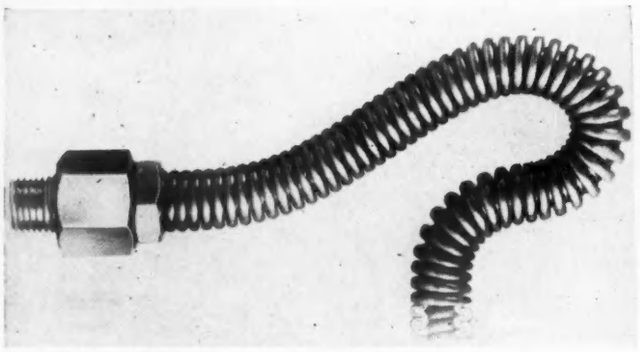
danger of injury to the operator. A safety lock is provided for use on fishing jobs.

Made of special alloy steel throughout, the elevator has been thoroughly shop and field tested. Sizes are offered to accommodate 6⅝, 5-9/16, 4½, 3½, 2⅞ and 2⅜-inch rotary pipe and for 2, 2½ and 3-inch tubing.

METAL TUBING

Seamlex Company

Seamlex Company, 5-19 48th Avenue, Long Island City, New York, is offering an entirely new design of flexible seamless metal hose in sizes ¼- to 1-inch which has the braid imbedded between two corrugated seamless tubes, forming an all-metal, weldless, jointless and packless metal



Seamlex Tubing

hose. It can be ordered in lengths of 12 feet and cut to required length in a few seconds. This tubing is made of special bronze alloy non-corrosive and resistant to frequent flexing and vibration. It is made in aluminum on order. Suitable fittings are available. This tubing is used for steam, water, oil, gas, air, gasoline, paint, etc.

LOW COST POWER

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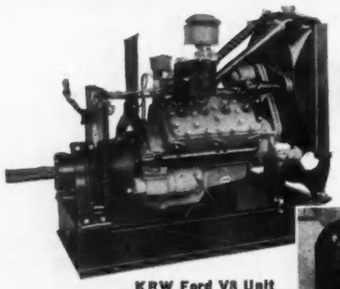
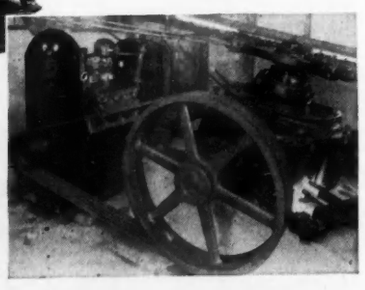
KRW-FORD V8 UNIT



KRW Ford V8 Unit Operating Pump Jack



ALSO KRW ELECTRIC PLANTS
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Here's dependable, low-cost power up to 60 H.P.—complete, compact, portable. Ideal for welders, compressors, hoists, pumps, pump jacks and other oil field equipment. For complete information, prices and data showing how a K R W Unit will pay for itself *out of savings* in a few weeks, write us or see your local Ford Dealer.

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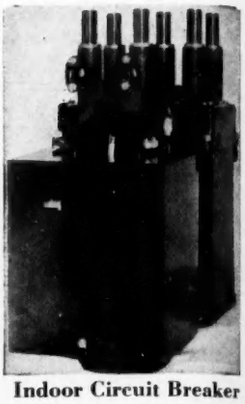
Exclusive Builders of Approved Ford Shop Equipment Since 1916

INDOOR OIL CIRCUIT BREAKERS

Westinghouse Electric & Manufacturing Company

Westinghouse Electric & Manufacturing Company, Pittsburgh, Pa., has designed for industrial and central station use, the Westinghouse 50,000 kv-a indoor oil circuit breakers that are especially desirable where minimum space is available. They are manually or electrically operated, non-automatic or automatic, single throw with adaptable mounting arrangements and are comparable in performance to larger capacity breakers.



Indoor Circuit Breaker

All levers are enclosed within the tank and top. Other features include De-ion interrupted contacts, condenser bushings, single square tank, hydraulic bumpers and silver-to-silver main contacts. These breakers are rated 50,000 kv-a interrupting capacity; 600 amperes, 15 kv; 1200 amperes, 7.5 kv; and 200 amperes, 5 kv; 2 and 3 pole single throw. Double pole breakers are obtained by omitting the center pole of a three-pole breaker.

PIPE LINE ANCHOR

A. B. Chance Co.

The A. B. Chance Company, Centralia, Missouri, has a pipe line anchor that prevents the tendency of the pipe line to float up to the surface. A special device, a clevis, has been devised to hang over the pipe, and regular screw anchors are bolted to each end after being screwed down. These can be put down to various depths, depending upon the length of rods used.

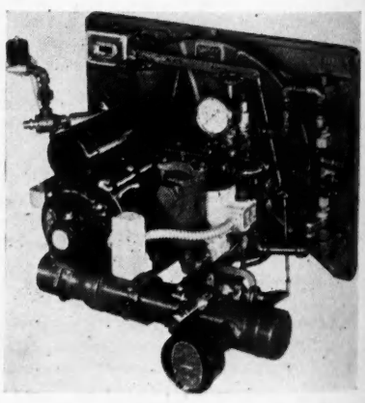
OIL BURNER

Simplex Oil Heating Corporation

Simplex Oil Heating Corporation, 30 Church Street, New York, announces a new type of oil burner in four sizes, rated for boiler sizes up to 120 horsepower, which mounts on boiler front. All of the operating equipment in the company's recently improved Type H.E.G.H. burner is mounted on a hinged fan housing and plate for attachment to a boiler front. Oil inlet and an excess-oil return line are carried through the housing hinge so the only connection that must be flexible when the mounting is to be swung open is the gas supply line for the ignition.

A motor that ranges from ¼ to ¾ horsepower is mounted on a bracket in fixed alignment to drive an oil pump, a revolving atomizer cup, and the fan which supplies air through a concentric cone surrounding this cup. Oil from the pump enters an electric heater, passes through a pressure-relief valve which protects against expansion strains, goes to a slow-opening oil-metering valve. From there it traverses a final strainer and enters the atomizing cup. Excess oil that is not admitted by the metering valve is returned to the supply tank through a return line.

The oil heater is electrically controlled to maintain correct temperature and a starting-temperature regulator prevents burner operation until the oil temperature is correct. A gauge shows pressure in the delivered oil.



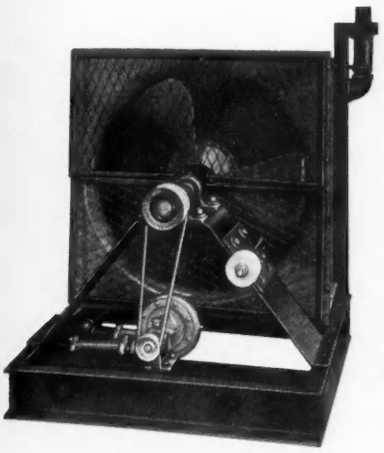
Simplex Oil Burner

Ignition gas is admitted through a solenoid valve and air mixer. It is ignited electrically. The air fan is actuated through an oil-air control unit which is link connected with the oil-control valve and with primary and secondary air dampers.

ENGINE COOLER

Chas. J. Franks Manufacturing Company

Chas. J. Franks Manufacturing Company, 316 E. 11th Street, Tulsa, Oklahoma, announces a new engine cooler which takes the place of a circulating water tank, designed to give maximum efficiency in cooling internal combustion engines. The cooler is available in three sizes with a capacity for cooling engines ranging from 25 to 150 horsepower. A special designed fan pushes air through the static pressure of the radiator, and where the radiator is centered in the engine house the air may be released through the ceiling. Radiators are made of copper and copper alloy with tubes of double lock construction withstanding 500 pounds pressure and specially treated to prevent corrosion.



Franks Engine Cooler

The power required to drive the radiator fan and circulating pump is approximately 2 horsepower with average fan speed of 650 r.p.m. Heavy duty self-aligning ball bearings are used throughout. All parts are of standard design and are readily available in all oil field supply stores.

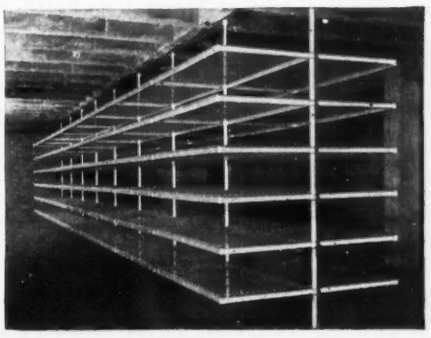
The unit can be changed to run in a counter clockwise direction at a small additional cost. The company maintains a transportation department for field delivery direct from the factory.

STORAGE RACK

Superior Wire & Iron Products

Superior Wire & Iron Products, 1057 E. 76th Street, Chicago, has developed a new storage rack claimed to have several distinct advantages.

Heavy wire mesh so woven to expose an absolute flush working surface for stock handling ease gives complete ventilation, prevents warping or moisture accumulation, allows no dust or dirt accumulation and permits the filtering of light through complete structure for better working



Superior Storage Rack

conditions. Shelves are adjustable to any position without trouble, allowing complete flexibility of equipment for changing stock requirements and permits a more compact stock arrangement. Center post construction allows access to material from any direction without hindrance. Built to fit any material handling requirements, Superior ventilated rack may be obtained in any size and is standard equipped for stationary, portable or mono-rail installation.

AIR COMPRESSOR

Worthington Pump & Machinery Corporation

Worthington Pump & Machinery Corporation, Harrison, New Jersey, is offering a new Type VS vertical single-cylinder, single-stage air compressor equipped with Worthington feather valves.

Made in both air- and water-cooled models, it is of the single-cylinder, single-stage vertical design with rugged

LUDLOW VALVES
STAND UP
Valves must be strong and dependable to withstand the exacting demands of drilling, pipe line and refining operations.
All Ludlow valves are built to last. The fine materials used in their construction—and the original Ludlow principle of wedge closure means years of economical, rugged service. Write for complete catalog.
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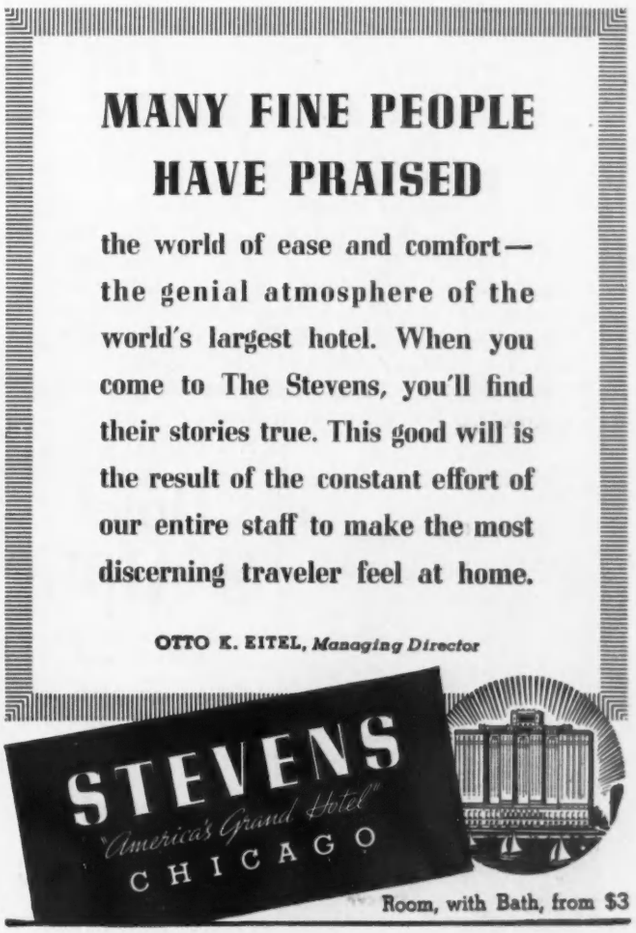
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the world of ease and comfort—the genial atmosphere of the world's largest hotel. When you come to The Stevens, you'll find their stories true. This good will is the result of the constant effort of our entire staff to make the most discerning traveler feel at home.
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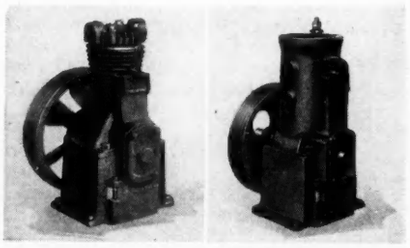
self-contained construction. Balanced rotary elements and light-weight reciprocating parts operate in an oil-tight, dust-proof housing with force-feed lubricated bearings, reducing friction and vibration to a minimum. The feather



Worthington US Compressors

valves are similar to those used on the larger Worthington compressors and are claimed to be highly efficient.

These compressors are furnished with pulley, hand unloader, special wrench and cylinder cover for optional closed or open cooling system on water cooled machines.

SAFETY GAS CUT-OFF VALVE

Detroit Lubricator Company

Detroit Lubricator Company, 5900 Trumbull Avenue, Detroit, Michigan, announces a new No. 535 Safety Gas Cut-Off Valve, a safety device designed to shut off the fuel supply to gas-burning internal combustion engines in the event of lubricating oil failure. It operates mechanically and is not dependent upon electrical circuits.

Gas Safety Cut-off Valve

This valve is installed in the main fuel gas line between the engine and hand controlled gas valve. The pressure power element is connected by means of pipe or copper tubing to the lubricating high pressure line.

OZALID OPAQUE RIBBON

Ozalid Corporation

Ozalid Corporation, 354 Fourth Avenue, New York, announced development of a new opaque typewriter ribbon—a dense ribbon created exclusively for photo-reproduction work and one that obviates the necessity of the usual carbon backing.

The manufacturer claims that this ribbon provides clearer, cleaner, and sharper reproductions of typing—is ideal for making master copies from which Ozalid white prints, blueprints, photostats, photo-engravings and photo-lithoprints are to be made.

It has been found that bills of material, specifications, and other important data are duplicated more quickly when an Ozalid ribbon is used, as its greater opacity results in faster printing and more legible prints.

This Week with the Industry's EQUIPMENT SUPPLIERS

H. A. Barber Made Vice President Barber-Greene Company

H. A. Barber was recently made a vice president of Barber-Greene Company, Aurora, Illinois. Barber, who received his degree in mechanical engineering at the University of Illinois, has acquired both practical and technical experience in all phases of the Barber-Greene line of material handling machines. He has worked in virtually every department in the factory, and has done a great amount of service work in the field, particularly on B-G Bituminous machines. His experience also includes research and engineering design.

In his new position, he will continue to assist his father, H. H. Barber, president of the company, in the supervision of engineering and manufacturing.

The officers of Barber-Greene Company are now H. H. Barber, president, W. B. Greene, vice president and treasurer, H. A. Barber, vice president, and D. G. McIlwraith, secretary.

Allen Elected Vice President John B. Astell & Company

H. B. Allen, who for 14 years was New York district sales manager of The Babcock & Wilcox Tube Company, has resigned from that company to become vice president of John B. Astell & Company, Inc., 90 West Broadway, New York, distributor in the New York Metropolitan district of B&W Seamless Carbon Steel Boiler Tubes and Alloy Tubes, and a wide variety of other tubular products including all kinds of welding fittings.

Superior Iron Works Changes Firm Name

Superior Iron Works, Inc., Shreveport, Louisiana, has changed its name to Superior Iron Works & Supply Company. The company has stores at Cotton Valley, Lisbon and Rodessa in addition to the main store, general offices and shops at Shreveport. Officers of the new company are: R. N. Poindexter, president; Mrs. G. C. Cook, secretary and treasurer; Frank J. Ackman, sales manager, and J. T. Summers, purchasing agent.

Boe Appointed Commercial Manager of Westinghouse

Appointment of H. F. Boe as commercial manager of Westinghouse Electric and Manufacturing Company, is announced by N. G. Symonds, vice president.

Boe will have headquarters in the Union Bank Building at Pittsburgh and at 150 Broadway, New York. In addition to being responsible for the sale of Westinghouse products in the Eastern District, he will now direct the commercial activities of the apparatus divisions.

A native of Mansfield, Ohio, Boe has been associated with Westinghouse since 1900. His studies included engineering courses at the Casino Institute of Technology and Carnegie Institute of Technology. For the first 14 years of his career he was active in East Pittsburgh headquarters works, engineering and sales departments. In 1918 he entered into sales work at the Rochester, New York office; then to Buffalo in 1922 as district industrial division manager. He was soon made manager of that office and in April, 1935, was transferred to New York, where in May, 1936, he became Eastern district manager, the position he still retains with the added duties of his new post.

PAUL KELTING
In charge of E. M. Smith Company's Houston branch

Daly Representing Wickwire Spencer in Gulf Coast

Wickwire-Spencer Steel Company announces appointment of E. J. Daly as Gulf Coast representative covering the territory from the Mexican border to New Orleans, with headquarters in Houston. Prior to accepting the above position, Daly was with Regan Forge & Engineering Company.

E. M. Smith Company Opens Branch at Houston

E. M. Smith Company, Los Angeles, announces the appointment of Paul Kolting as its factory representative with headquarters at the company's newly opened warehouse at 2311 West Street, Houston. Kelting, who has been active in both the Mid-Continent and Gulf Coast oil fields since 1920, for the past 10 years has been connected with Emsco Derrick and Equipment Company as manager of derrick sales, Southern Division, with headquarters at Houston.

The new factory branch of E. M. Smith Company will maintain a Grizzly Rotary Brake Block Band Exchange. Under this exchange plan Grizzly Full-Moulded Rotary Brake Blocks installed on new steel bands that are duplicates of those used on the draw works by the manufacturer, are exchanged for the old, worn and warped bands which are junked.

In addition to the brake band ex-

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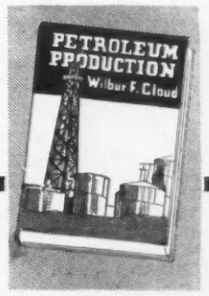

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change the company will carry a complete stock of rotary hose, pipe protectors, wire line savers, brake blocks, and other types of belting and mechanical rubber goods.

Well Equipment Company Celebrates Third Anniversary

Well Equipment Company, Houston, celebrated its third anniversary with a sales meeting marking the growth from a one-man outfit to one covering the entire Mid-Continent territory, selling exclusively through supply stores. New members of the organization are D. R. Etzel, who will work North Texas and the Panhandle with headquarters at Wichita Falls; E. R. Fritz, who will handle North Louisiana and Arkansas, with headquarters at Shreveport, and C. N. Benjamin, who will cover East Texas from Tyler.

Directional drilling at Houston Oil Show

Houston.—The increased interest shown in directional drilling and the great value of this technique in meeting many problems have lead the Oil-World Exposition to plan a comprehensive program on this subject at the oil show to be held in Houston, Texas, October 11-16, 1937, inclusive. The directional drilling committee under G. B. Corless, chairman, has decided to review the experiences in producing directionally drilled wells which have been completed up-to-date and to discuss the mechanics of controlled drilling and the various methods of surveying wells so that practical field men will have a better understanding of the problems involved.

The schedule of the program is as follows:

1. "Historical Review of Production Experience on Deviated Wells," by H. John Eastman.
2. "Technique of Controlled Drilling," by Douglas Ragland, Humble Oil & Refining Company.
3. "Well Surveying Methods."

(a) "Oriented Surveys," by Lane-Wells Company.

(b) "Gyroscopic Surveys," by R. S. Hyer.

(c) "Magnetic Surveys," by Eastman Oil Well Surveying Company.

4. "Geological Application of Oriented Coring," sponsored by A. B. Patterson, The Texas Company.

The committee composed of G. B. Corless, Chairman; Ed. Lenzner, Assistant Chairman; Alexander Anderson, Alexander Anderson, Inc.; H. John Eastman, Eastman Oil Well Surveying Company; R. S. Hyer, Sperry-Sun Well Surveying Company; A. B. Patterson, The Texas Company; M. L. Cashion, Gulf Production Company; D. B. Collins, Shell Petroleum Corporation, is conferring with the various leading engineers and superintendents and will provide a very interesting meeting in the convention hall of the exposition building on October 12, Tuesday, from 2 P.M. to 4 P.M. This particular program will be of great interest to many engineers and superintendents and oil men from all parts of the country and should be of particular value to foreign visitors by giving them complete data on this important subject which has been so highly developed in the United States.

Squeaks from the Bull Wheel

Guilty Party

Clerk—I thought I'd tell you I've been here just 25 years, sir.

Boss—So it's you that's worn this hole in the carpet.

Naturally

"I suppose you know why I've stopped you, Miss," remarked the country policeman heavily.

"Yes," replied the lovely motorist, "you're lonely."

Explicit

"Pardon me, does this train stop at Tenth Street?"

"Yes; watch me, and get off one station before I do."

"Thank you."

Correct

I want you to settle an argument. I say you pronounce the name of this stone as "turkwoys," and my friend says it is "turkwos." Who is right?

I'm afraid you are both wrong. the correct pronunciation is "glass."

Airplane Model

"Say," said the woman customer over the telephone, "the next time I order chicken, don't send me any more airplane fowls."

"What do you mean — airplane fowls?" asked the butcher.

"You know what I mean; all wings and machinery, and no body."

High Cost of Weddings

That wasn't a very big account of your daughter's wedding in the paper. No; the big account was sent to me.

Etiquette

"I'm afraid you'll be late at the party," remarked an elderly lady to her granddaughter.

"Oh, dear, grandma," said the girl, "don't you know that in a fashionable set nobody goes to a party until everybody has got there?"

Here's One

An Englishman was walking along a river bank in Ireland when it started to rain. Presently he found an Irishman fishing with his line under a bridge.

"Why," he asked, "have you got your line like that?"

"Sure, yer honor," replied the angler, "won't the fishes be crowdin' in out of the wet?"

Waterproof

The guest landing at the yacht club float with his host, both of them wearing oilskins and sou'westers to protect them from the drenching rain, inquired:

"And who are those gentlemen seated on the veranda, looking so spick and span in their white duck yachting caps and trousers, and keeping the waiters running all the time?"

"They're the rocking chair members. They never go out, and they're waterproof inside."

The above pictures Hu Harris, drilling superintendent for Humble Oil & Refining Company, and Wallace Wilson, president of Wilson Supply Company, at Port Aransas, following a fishing trip. The big fish in front looks familiarly like a rubber fish we once used in a similar photograph but Hu and Wallace declare that it was alive and wriggling when removed from the water.

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With the Bailer Bottom installed the MILLER is quickly changed to a Bailer giving you a combination of either Bailer or a Sand Pump in one tool.

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Used when tools are run and when well is shot to quickly remove loose material.

● STAR BOTTOM
Used for cutting the sand loose.

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(In Pump)
With this bottom tightly packed sand can be easily broken in small pieces so it can be picked up in the pump.

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See Page 1186 COMPOSITE CATALOG

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